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Improving Recruitment Process at Fluido



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The concept of improved recruitment tool came into mind while discussing with my Team Lead who is part of Fluido from beginning. The journey has been a great learning experience when working on thesis and doing research related to it.

I'm grateful to my professors for helping and guiding me through the master's program. This program has not only given me new ideas, but also it helps me understanding the processes and improve my writing skills. I wanted to thank my mentor 'Dr James Collins' for the guidance on writing this thesis and helping in understanding the details for doing research. Also thanking Sonja Holappa for all the help in writing clinics and reviewing my drafts at every stage.

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In the end would like to thank my husband and family for their support and help throughout study time period.

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<p>The thesis aims to propose an improved recruitment tool for Fluido. The proposed recruitment tool aims to reduce the redundancy of efforts for Fluido recruitment team in screening and reviewing application time. The proposal is built based on triangulated data collected through interviews, workshops and meetings with technical architect and developer team. A conceptual framework was built based on the weaknesses identified in the Current State Analysis carried out at the beginning of the study.</p> <p>The improved recruitment tool was proposed to recruitment team which takes in account all the weaknesses and strengths of the existing recruitment tool used by recruitment team. The validation of new improved tool was done by the recruitment team. The proposal also covers the implementation plan for improved recruitment tool.</p>	

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## 1 Introduction

The success of an organization to obtain quality human resources (HR) is through the recruitment process. Human resource is an operation in the companies, designed for a process of recruiting, onboarding, orientation and providing training. The importance of human resource readiness is not only needed by private companies but also by public organizations. Organizations try to utilize the opportunities over the internet in all their operations and this is true in human resource management process while exploring recruitment and selection.

Technology makes the tasks of recruitment, payroll, onboarding, orientation more manageable and allows human resources staff to engage with employees of the company. Automating parts of recruitment process decrease the risk of hiring wrong candidate and relieve administrative tasks. A recruitment tool helps human resources and team to bring recruitments to another level. An attractive career page in the organisation website maximize the chances of attracting right candidates.

Fluidio Oy Finland based IT consulting company, which works on cloud-based application for its sales, marketing and service customers for their digital transformation by using salesforce technology. Salesforce is a cloud computing service as a software. Salesforce is a customer relationship management solution that comprises various categories like sales cloud, service cloud, marketing cloud, community cloud and analytics cloud.

In 10 years, Fluidio has grown to become the leading Salesforce partner in Europe employing over 350 experts and serving over 300 customers. To meet the demands of growth targets, human resources team of Fluidio need to recruit highly skilled individuals with right mindset. Culture fitness, motivation, learnability, attitude and skills are the key points to keep in mind by human resources team, practice leads, and team leads. A recruitment tool helps to cope up with these but there is need of improvement in various areas like careers form of job application, synchronization and coordination among different countries after interview, auto response emails of selection and rejection email.

## 1.1 Business Context

The case company is Fluido helps Nordic companies reach their goals and create outstanding customer experiences using salesforce technology. Fluido customers are basically in Finance, Manufacturing, Construction, Shipping, Retail, Energy, Technology, Media and in Education. Fluido is the leading Salesforce Consultancy and Partner in the Nordics. Fluido offers consulting, development, and integration services tailored to their customers' needs. This enables the customers to reach their goals, transform, and create outstanding customer experiences with the use of Salesforce technology. Fluido's customers include both large globally operating enterprises as well as growth companies across industries in all Nordic countries.

Fluido is not just a place to work. But it is whole package because of people, offices, culture, expertise, and clients. Because of 350+ competent multinational experts, experienced staff works in 8 locations across Europe – in Espoo, Turku, Stockholm, Gothenburg, Oslo, Copenhagen, Munich, and Banska Bystrica. Even though team is built of over 35 different nationalities and is working in six countries, Fluido is a tight and friendly community. Fluido has been awarded the Future Workplaces certification in Finland for being a trailblazer in providing a workplace focused on understanding employees and keeping that at the heart when leading business and company culture. Without Recruitment tool, it cannot be achieved at such a scale. (Fluido)

## 1.2 Business Challenge, Objective and Outcome

Recruitment process in Fluido usually happen through website career form where job applicants can apply for their specific application and fill the career form with all their details and attaching a profile to it. Once the application form is filled and submitted, an applicant record is generated as a lead to which only global recruiting team can see and judge the profile. If profile matches to the suitable job application, further process of interview starts and after two to three rounds, the response email is generated if the candidate is selected or rejected.

The whole process is not well automated and this needs to be automated and need some improvements in the career form as well where applicant can fill mandatory fields which can help in filtering right profile. One big challenge within the tool is profile are not attached to applicant record directly but it needs to be first added to local system and then have to attach manually to initiate the process. This needs to be improved technically.

Human Resources function in a Fluido has used social media solutions in resourcing with LinkedIn, but it does not have a systematic way to use social media among recruiters and hiring managers.

The case company in this thesis does not have a social media strategy, but it is present in social media via solutions as LinkedIn, Twitter, YouTube and Facebook. Company's businesses and functions use social media channels in different ways. The company is interested in wider presence in social media but does not have systematic tools and plans for it (Sanna,2010).

## **Objective**

To propose an improved recruitment tool that would overcome the challenges in the software and ease the process for human resources staff.

## **Outcome**

The outcome of the study is an Improved Recruitment Tool for Fluidio .

### **1.3 Thesis Outline**

The thesis is presented in seven sections. Section 1 is about the introduction what is the study about. Section 2 deals with the methodology and research used in this study, while Section 3 was conducted to do the Current State Analysis of the recruitment tool currently being used by the Fluidio recruitment team and reports on the results as for the strengths and weaknesses of the tool.

Section 4 is about discussion and ideas from the literature and content available about tool in recruitment process and knowledge needed to improve the recruitment tool. By combining different scholarly articles and literature an improved recruitment tool can be build that was proposed in a conceptual framework.

Section 5 is where the final building and designing of the recruitment tool takes place keeping in mind the identified gaps from section 3. and Section 6 validates this recruitment tool. Finally, Section 7 conclusion and summary of the proposal for the improved recruitment tool.



## **2 Method and Material**

In this thesis action research is used as a research approach because the Action research (AR) is an approach to research that involves researchers and participants working together to undertake cycles of action and re-flection to improve future actions (Norton,2018). The study is conducted for the organization, to propose an improved recruitment tool and actions that are done clockwork with consultants, recruitment team and technical architect for research design, data collection and analysis. This section includes research approach, data collection and analysis used in this study.

### **2.1 Research Approach**

The thesis is based on the action research approach as the main research approach. This approach is practical in solving daily issues as this involve researching the relationship between the theories of analysing, implementing and evaluating the problems of recruitment tool. It involves gathering the evidence from multiple sources and learning the real, material, concrete, practices of tool. The research is about finding the issues in the current recruitment tool of Fluidio and finding the common pain points of tool in all other countries and then proposing an improved recruitment tool addressing the needs of the Fluidio.

While recruitment, organizations have some strategy for job filling positions and recruitment process and some strategy questions like when to begin recruiting? and Whom to use as Recruiter? Is the tool suited for all types of candidates? are considered for an organization. The final stage of the recruitment process involves an evaluation of recruitment results. More specifically, an employer should compare its recruitment objectives (i.e., what it hoped to accomplish) against its recruitment outcomes (i.e., what it actually accomplished). Doing such employer should allow the employer to learn from its experiences so that it can more effectively recruit in the future. The research approach used this action approach for pain points, feedback and monitoring. Figure 1 shows the Cyclic Process of Action Research.

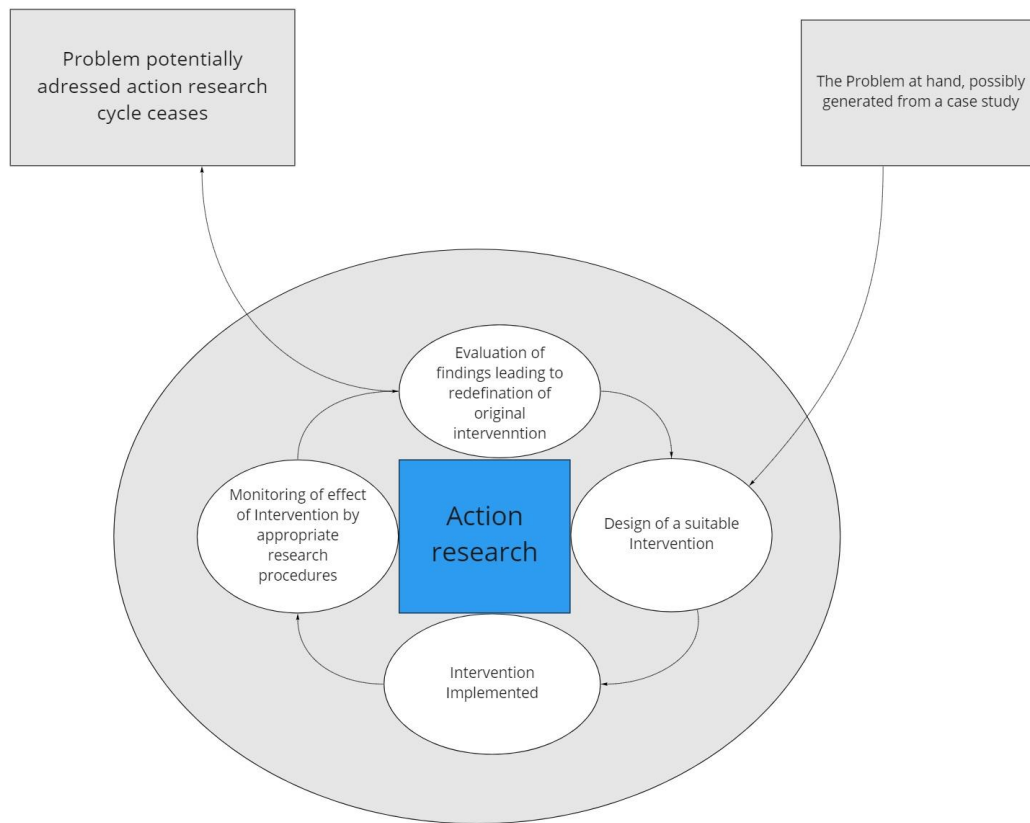


Figure 1. The Cyclic Process of Action Research-(Desma,2019)

The Figure 1 represents the general process of Action Research which indicates the length of time-scale that could take for cycle completion. Identifying a problem, designing and implementing the intervention, monitoring of effect of intervention, evaluations of findings are different elements which complete the cycle process of the thesis. The thesis focuses on the problems of recruitment tool used in Fluido and this process starts with analysis of the problem and process of changes which can be implemented for these problems.

The findings of research will then be analysed, evaluated and further modifications or re-modifications will be proposed, whereupon new modifications will be implemented and whole cycle commences again as shown in Figure 1. (Desma,2019)

## 2.2 Research Design

The research design of the thesis is identifying the limitations and issues of current recruitment tool, proposal for improved recruitment tool and validation of improved recruitment tool and all these involves information collection method and the sources. The data collection is linked to the respective proposed outcomes. The research helps to plan a layout for the information collected from different sources. The research design for the thesis is shown in the below image:

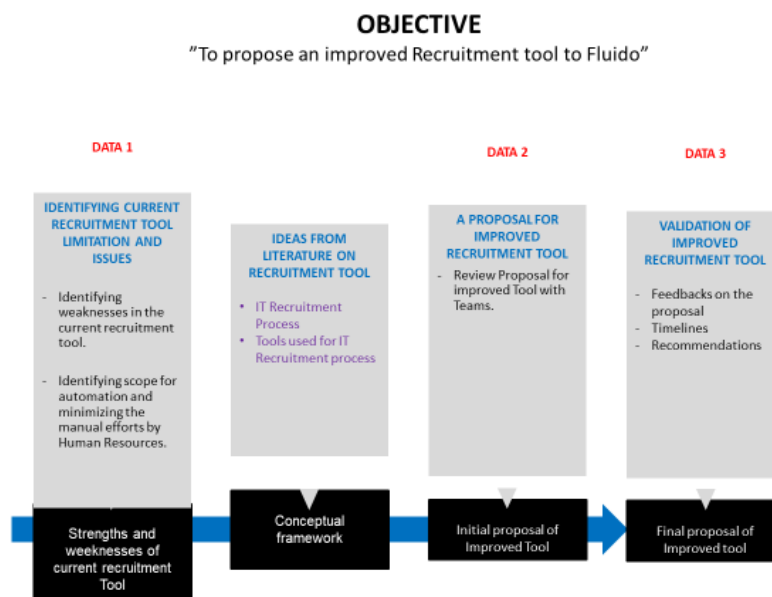


Figure 2. Research Design Approach

The first step in research design is the current State Analysis which is to identify the current state analysis of Fluido recruitment process and tool used for this process and identifying the strengths and weaknesses of this tool. The data for current state analysis is collected through documents from the Fluido resources like report and by conducting face to face interviews with human resources team. Identifying scope of automation and minimizing the manual efforts by human resources is also a part of this process.

The second step in the research design is literature review which is to get ideas from literature on the recruitment tool, emphasis on finding of technologies, versions of tool, integration designs, information technology recruitment process and issues and challenges faced by Fluido. The literature referred to is mostly around IT recruitment process, recruitment tools, social media used for these tools, automation technologies, tool used for synchronization among various countries. The outcome

in the literary review is a conceptual framework for the recruitment tools used in different parts of recruitment process.

After the first and second steps i.e. current state analysis and the literature review, the next steps are creating a proposing solution for the improved version of tool and automated related suggestion for the salesforce platform with improvements and core features of the current system. Including both the steps it lays the base for building of the proposal for synchronic platform. The validation of the proposal is to be done by the global recruitment users through surveys and face to face interviews.

### 2.3 Data collection and Analysis

The data plans are divided in three categories shown in Figure 3, Data 1 consists of the current state analysis of the current recruitment tool used in Fluidio. Data 2 is creation of the proposal for the improved recruitment tool and Data 3 is for the validation or feedback of the proposal. The below Figure presents the data plan in the thesis.

DATA PLAN					
	CONTENT	METHOD	INFORMANT	TIMING	OUTCOME
<b>DATA 1</b> For identifying current recruitment tool limitations and issues	<ul style="list-style-type: none"> <li>- Identifying issues in current recruitment tool</li> <li>- Identifying what needs and can be automated in the improved tool</li> </ul>	<ul style="list-style-type: none"> <li>- Documents of Recruitment process and tool.</li> <li>- Face to Face interview with Fluidio Global recruitment tool</li> </ul>	<ul style="list-style-type: none"> <li>- Fluidio Recruitment Tool</li> <li>- New Joinees/Consultants/Developers</li> </ul>	JANUARY-2020	<ul style="list-style-type: none"> <li>- Strengths &amp; weaknesses of current recruitment tool</li> <li>- specifications for improved tool</li> </ul>
<b>DATA 2</b> For proposing a solution	<ul style="list-style-type: none"> <li>- Review solution proposal with the IT team</li> </ul>	<ul style="list-style-type: none"> <li>- Weekly Workshops with Human Resources Team</li> <li>- Review with People and Culture Team</li> </ul>	<ul style="list-style-type: none"> <li>- People and Culture Team</li> <li>- Human Resources Team</li> </ul>	MARCH-APRIL-2020	<ul style="list-style-type: none"> <li>- Initial proposal for reconfigurable recruitment tool</li> </ul>
<b>DATA 3</b> For validating the solution	<ul style="list-style-type: none"> <li>- Feedback on the improved tool</li> <li>- Timelines</li> <li>- Recommendations</li> </ul>	<ul style="list-style-type: none"> <li>- Proposal Surveys</li> </ul>	<ul style="list-style-type: none"> <li>- People and culture</li> <li>- Fluidio Consultants</li> </ul>	MARCH-APRIL-2020	<ul style="list-style-type: none"> <li>- Final proposal for a improved Recruitment Tool</li> </ul>

Figure 3- Data Plan in thesis

As can be seen in Figure 3, data methods used in the thesis are face to face interviews where data is collected from interviewee as this is personal approach and data collected will be highly personalized. As the interview is informal, structured, conversational, it's easier and timesaving to process the obtained data and it is standardized to a certain extent if there are no same series questions. Recruitment team are selected for the interview in this thesis as recruitment process is mostly used

by recruitment team. Consultants, technical architects are the part of this process as the technical design and feasible can be best described by them through this process.

Closed Question	Open-Ended Question
<div>Career option in Recruitment process needs improvement?</div> <div><input type="checkbox"/> I am happy with the tool</div> <div><input type="checkbox"/> It needs improvement</div> <div><input type="checkbox"/> I dont like the tool</div> <div><input type="checkbox"/> I have not used it</div>	<div>The referral details in Recruitment tool needs improvement?</div> <div>I have used the tool and I cant able to add my referral details as there is no separate field to show it</div>

Figure 4. Close -Ended Question and Open-ended Question used in Thesis

Figure 4 for shows an example of close-end questions and open-end questions used in this Thesis. Other data method used in the thesis are internal documents which are used for recruitment process, job selection and onboarding process, tool used for these processes as this helps to understand current state analysis of the process. Closed-ended surveys give respondents predefined answer options to opt for. There are two main types of closed-ended surveys –categorical and interval/ratio questions. Categorical survey questions are yes/no type questions, multiple-choice questions, or checkbox questions, and can be answered with a simple “yes” or “no” or a specific piece of predefined information or can be selected with a checkbox or can be selected with multiple choice selections. Interval/ratio questions, on the other hand, can consist of rating-scale, Likert-scale, or matrix questions and involve a set of predefined values to choose from on a fixed scale. (Jovancic,2019).

The analysis of data is done through face to face interviews, hangouts calls and surveys. Developers and technical architects are chosen for closed and open-ended survey. Recruitment team is also included in interviews and describes the current state analysis and validates the proposal plan.

### **3 Current State Analysis**

This section analyses what is the current state of recruitment process and onboarding process in the Fluidio and tool used for this process. An introduction to the strengths and weaknesses of the existing recruitment tool for human resources and candidates who are applying for the jobs which includes comparison between strengths and weakness of the tool. The data collection for current state analysis helps to identify the current issues with tool.

#### **3.1 Overview of the Current State Analysis Stage**

The current recruitment process analysis is done through various data methods like open ended questions and closed ended questions, face to face interviews and skype meetings. The Recruitment team member has been interviewed through the process and the below section describes the analysis in detail.

#### **3.2 The Current Recruitment Process**

Recruitment is the process which includes posting the vacant positions in the Fluidio website, screening, selection, interview and finally choosing the right candidate and then rolling out offer to the selected candidate .Preparation phase is the phase where recruitment team put together a job ad through various communication channel like linked in , Facebook ,recruitment agencies , careers in Fluidio website to spread the vacant positions. Job descriptions of related vacant positions helps to identify the hiring managers to know what the expectation are. After this phase, there is receiving application phase where the hiring team received the applications from various channels like LinkedIn, careers and referrals. The applications received through email take lot of time to organize and register applications and replying to those candidates. After this process, there is screening process where each stage eliminates the unqualified applicants and the candidates who are not suited for the applied position. Elimination process of unqualified applicants depends on the basic requirements and if these basic requirements are not fulfilled then the email is dropped to relative cases to inform them that they have not made it through to the next round and they can apply later for next requirement .After the screening process , there is ranking of the candidates to understand which applicants need to call for an interview on the basis of skills and the candidates are fit to the requirement and then choose few of them for interview to meet the candidates in person.

The interview phase happens through skype, hangouts and face to face depending on the locations of the candidates. With two or three rounds of interview based on technical backgrounds and assignments provided to candidate, candidate is judged on the basis of right attitude of learning and doing things professionally and skills can matter or can't matter sometimes depending on the requirements which can be improved later in the trainings.

If the candidate is rejected, recruitment team send a personalized message or be in touch them through phone to convey message. Feedback is also provided in the applicant record stating the reasons why the candidate is not selected. The last round of interview usually conducted to follow-up if the candidate assessed is highly qualified and suited for the job can deliver in future situations. Figure 5 shows the flow of applications in different stages of recruitment.

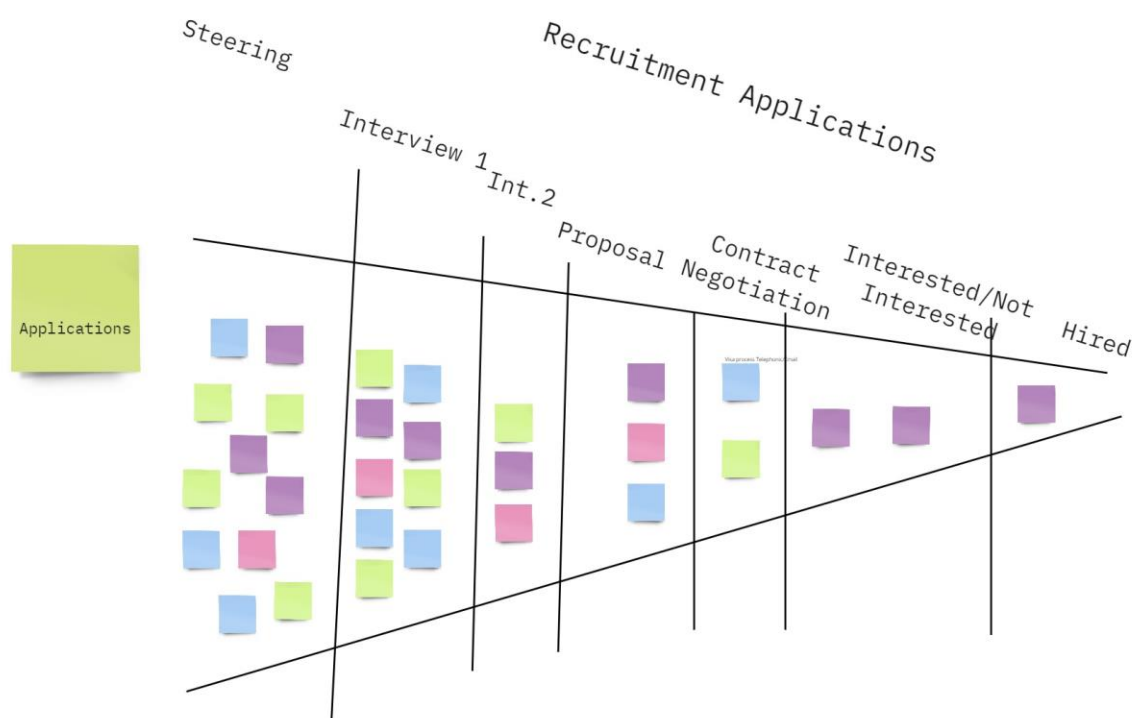


Figure 5. Flow of Applications in different stages of Recruitment in Fluidio

Figure 5 describes the flow of applications in different stages of recruitment. In Steering process, there are lot of applications and these are filtered on the basis of basic requirements .After Steering phase, there are Interview Stages which are usually conducted by technical team either consultants

and senior developers and elimination is done on the basis of right candidate and then in proposal phase, candidate is selected on assignments given and hired stage , candidate is rolled out an offer .Interested applicant who is interested in the opportunity can accept the offer and non-interested candidate reject the offer. After this there is an onboarding process for the selected candidates on dates they are offered. These sticky notes describe the various applications.

Selected candidate gets and offers and gets the signed contract from CEO and recruitment team and all other applicants are informed that they are not chosen, and that position has now been filled and they can apply for next position later.

The main purpose of the current state analysis was to understand the current architecture of recruitment process and the challenges which candidates face while applying for recruitment process in Fluidio and challenges faced by recruitment team in the current process. The current architecture of recruitment process describes above tells the process and information flow using the recruitment tools, recruitment team who is using the tool daily provides details about the process followed and steps taken to solve the issues facing using the tool. The recruitment team and consultants and developers who are part of the workshops are experienced people who have been part of the organization since long time.

The consultants interviewed are having a deep understanding of the process, they have been interviewed during their selection time are in this company for a long time and understand the key factors which are critical to the process. They help in guiding and decision-making process. The questionnaire deals with queries related to the recruitment process give an estimate of the efforts that may go in the improvements.

The data collected helps in understanding the limitations and issues with the current recruitment tool, the gaps in the process makes the planning and designing of the improved version of recruitment tool. Some observations were also recorded which was taken as notes from the team meetings for designing of the tool and the observations were related to tools analysis and study for the improvement in recruitment process



### 3.2.1 Current state analysis of the current Recruitment tools used by Fluido

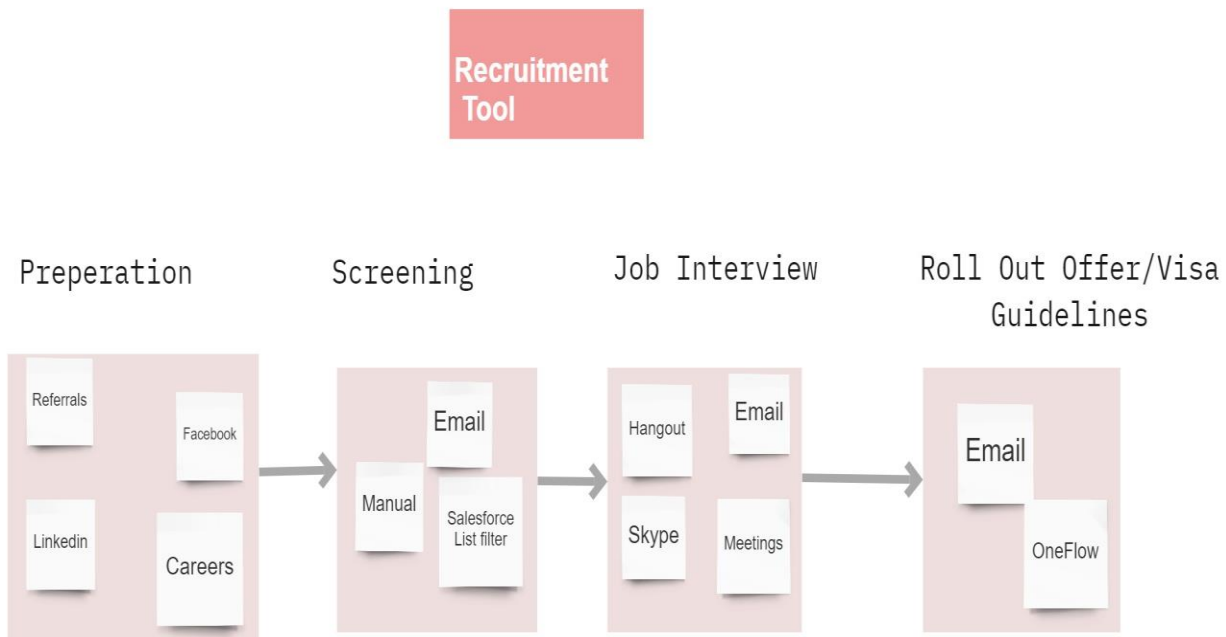


Figure 6. Different tool used in each phases of recruitment in Fluido

Fluido is using various tools used in Recruitment process during different phases and the Figure 6 describes the tools used in each phase. In Preparation phase, careers in website is one of tool where job postings and advertisements usually done. There are social media channels also like Facebook, LinkedIn for adding the job openings and job descriptions to attract the skilled and right candidates. Various recruitment agencies are also contacted through phone and email if openings are there and they can also fill the candidate information through careers. Screening process includes filtering and it usually done through Email, or salesforce as a tool to filter through reporting, dashboards. For Job interview, hangouts, Skypes and face to face interviews conducted for the candidates. For roll out offer, personalized Email and oneFlow tool to be used for signed contract. International Candidates can contact through email if there is support needed for visa guidelines and this process uses Email and phone.

### 3.2.2 Recruitment process Flow using Careers in Fluido Website

Fluido has various open positions like salesforce developer, program manager for all 6 locations of Fluido and candidate can apply through this job openings. Once candidate click on the position, the job description page appears and the form requiring name and profile required for this form.

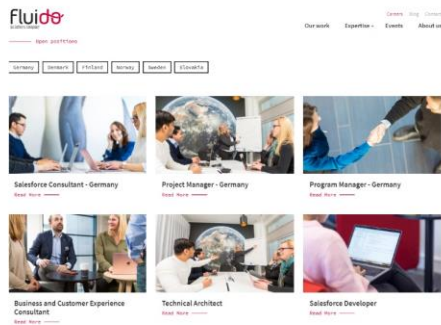
A screenshot of the Fluido job application form. The form is divided into two main sections: 'Personal information' and 'Relevant previous experience'. The 'Personal information' section includes fields for 'First name', 'Last name', 'Email', 'Phone', 'Language', 'Address', 'City', 'Country', 'Postcode', and 'Twitter'. The 'Relevant previous experience' section includes a text area for 'Relevant previous experience' and a table for 'Relevant experience #1' with columns for 'Organization name', 'Year', 'Role', 'Start date', and 'End date'.

Figure 7.1 Open Positions in Fluido, Job Description Form

The Figure 7.1 describes the open positions in Fluido and Job Description form where candidate can fill his or her details with professional experience and other experiences. After filling this form, the automated email is generated through salesforce on email and the template is shown in 7.2

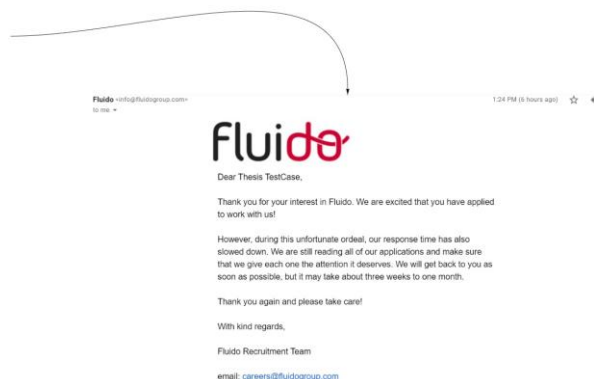
A screenshot of the Fluido job application form, identical to the one in Figure 7.1. It shows the 'Personal information' and 'Relevant previous experience' sections with various input fields and a table for previous experience.

Figure 7.2 Job Description Form, Email Template of Fluido

After the applicant submit the application, recruitment team check the Applicant object and filter the positions according to list view like business consultant Finland, developers and architects Finland and if there is something interesting, interview is coordinated and if it does not fit Fluido, status is changed to “Steering Review -No” and manual email is sent to the candidate saying “No , Thank you”. In case the candidate has been interviewed and the decision is to not go forward (Interview - No), the status is changed to “Interview -No” .In case the candidate has a potential for some roles in the future, status is marked “Interesting, contact later” and a generic email is sent to ask the candidate for permission to keep the application. Also, the notes need to write why the candidate could be interesting for the future. The new GDPR and Security Law require to check the applicant’s identity. Reference call is a good way to get to know how the candidate really is in working life. Once the status is changed to “Proposal to be sent”, notes or chatter tool in the salesforce is mentioned to global recruitment team so that they can proceed with the contract. For the contract starting date, Salary or Salary expectation and if there are exceptions are needed. Everything is recorded in Applicant Status, so team members of global recruitment team can able to know each stage. Figure 8 describes the applicant record.

The screenshot displays the Salesforce interface for an Applicant Record. The top navigation bar includes tabs for Details, Chatter, and Activity. The main content area is divided into three sections: Details, Chatter, and Related.

**Details Section:** This section contains a form for entering applicant information. Fields include: Name (Thesis Test Case), Email (Thesis Test Case), Phone (Thesis Test Case), Address (Thesis Test Case), and Date of Birth (Thesis Test Case). There are also checkboxes for "Is a Public Profile" and "Is a Private Profile".

**Chatter Section:** This section shows a list of chatter posts. A post from "Thesis Test Case" is visible, with a comment "New to public profile" and a "Like" button.

**Related Section:** This section contains three sub-sections: Notes (0), Notes & Attachments (1), and Applicant History (1). The Notes & Attachments section shows a single attachment titled "Thesis Test Case - attachment" with a "View All" link. The Applicant History section shows a table with columns: Date, Field, User, Original Value, and New Value. The table contains one row with the date "2014-2020-13-24" and the field "Created".

Figure 8. Applicant Record used by Global Recruitment team with stages in Fluido

When an applicant status changes to Hired it automatically creates an Onboarding. This object is treated as a project, everything that relates to the new employee on the Onboarding is added on the

object information. Once the candidate has signed the contract, welcome call and device preferences is asked and added to Onboarding. Fluido Friend is a friend who helps in onboarding and helps to coordinate the new employee to all team members and explains the office culture. Fluido Friend is added at least 4 days before the new person starts.

### 3.2.3 Recruitment process Flow using Social Media Advertisements

Social Media plays an important role in Fluido for example Facebook, LinkedIn, Instagram. LinkedIn and Facebook stand out an important recruiting tool as it includes job posting features for recruiters and are popular among young professionals and thus reaching young professionals around 500 million active users in Facebook is helpful for companies hiring international potentials. In Fluido, there are people of around 35 nationalities and both these sites help to grow the business worldwide.

### 3.2.4 Recruitment process Flow using Recruitment agencies: -

Recruitment agencies are contacted if there are open positions and they also follow the same process as mentioned in 3.2.1 Agencies are contacted via email, phone and they can add the candidates form in careers and applicant record process is same for global recruitment team.

### 3.2.5 Different communication Channels: -

This section deals with description of different aspects which are analysed for current state analysis of the recruitment tool. Different Communication channel used for this thesis are described in below Figure 9. Recruitment team, consultant, technical architect are the informants and role of informants are defined in the below Figure.

Figure 9 contains Roles and Responsibilities of the consultant and customers involved in workshop

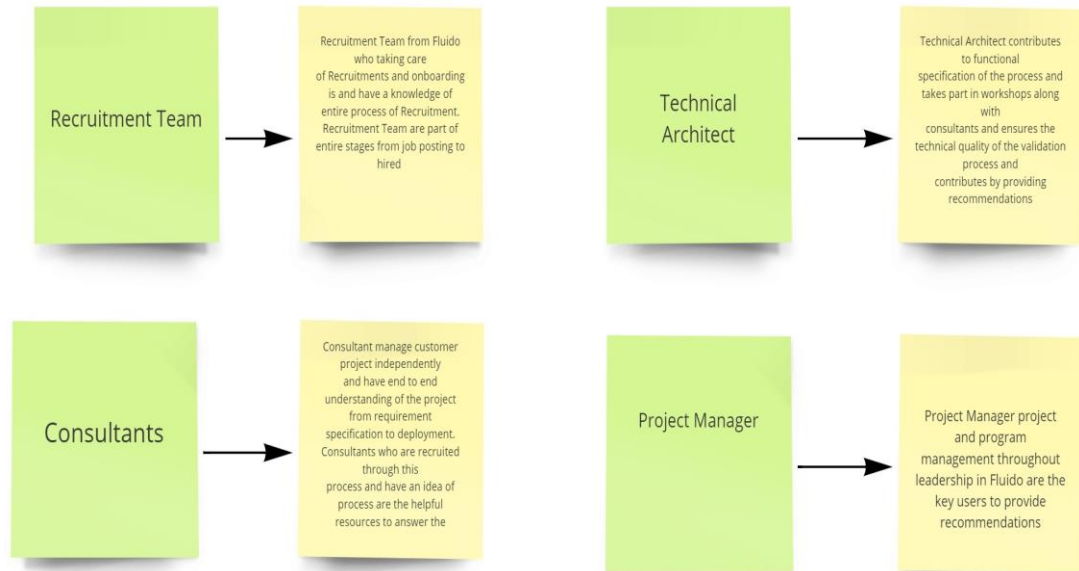


Figure 9: Communication channels used for current state analysis in Fluido

### 3.2.5.1 Different Communication Channels

Recruitment tool has been used by each employee of Fluido during the recruitment process and different employee has different experience and collaborating their experience in single place is done in current state analysis. Role and responsibilities are shared in Figure 9.

## 3.3 Understanding the Architecture of Recruitment Process

The Recruitment process has different incoming channels after job posting and advertisements and candidate can contact the recruitment team of the Fluido through different mediums possible such as email, LinkedIn, Careers, referrals or recruitment agencies. Recruitment team use different tools to capture these incoming requests which are handled by the recruitment team globally as Figure 10 shown below.

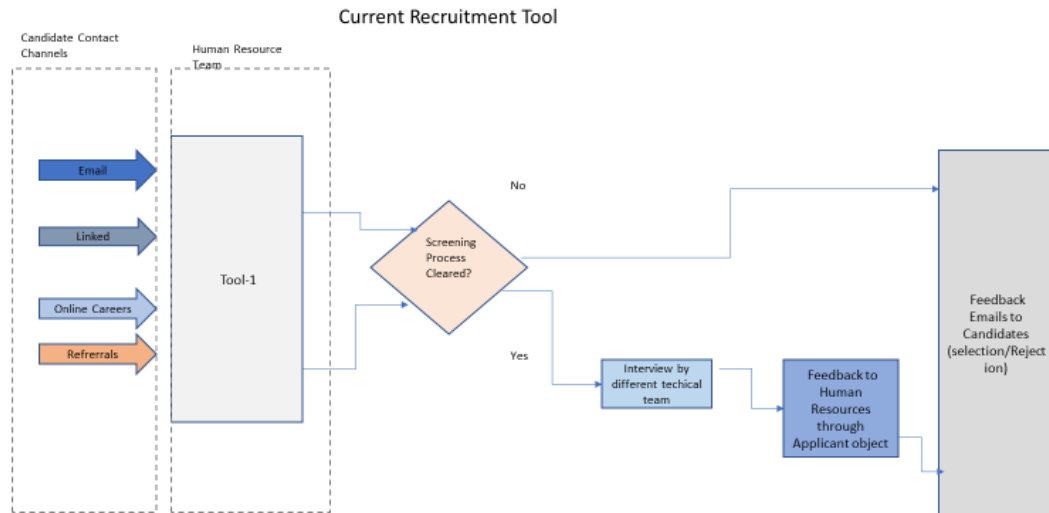


Figure 10. Architecture of Current Recruitment Process.

As shown in Figure 10, the second part of tool is related screening process and contacting candidates through personalized emails or automated emails. The recruitment team manually email to candidate of screening and move each profile to other stage in the recruitment tool. The tool handling screening process has limited automation which can help candidate to resolve or answer the queries in a defined time frame.

Interview process is done through the telephonic conversation or skype or hangouts or face to face between different team members and feedback is stored in tool for documentation and for transparency purpose. The interviewer and recruitment team need to link the records of each candidate in the tool which might be existing candidate or a potential candidate. Candidate interview date and related details are maintained, and contact information are mapped with them, so the reporting can be done based on the candidates interviewed.

The third part of tool which most for the interviewers use for the feedback is chatter and applicant record notes. Chatter is used to communicate among team members of recruitment team or other interviewers who might be involved in next interview or HR round.

Feedback is reported in the tool and can be used later for Reporting and dashboard. All the information is saved for 1 year and after that the information is deleted in order to keep GDPR practice.

The tool depends on other processes and tools to answer the candidate of visa guidelines queries, onboarding process, LinkedIn channel, recruitment agencies. The lack of automations or integration causes a great amount of manual efforts for information flow to happen between tools. Recruitment team are responsible for the information flow happening across different teams.

For any additional information needed or approval for new hired candidate, recruitment team reach out to next level or other teams. So, every request must go through different tools which are not automated to integrated, which causes time related issues and agent don't have any proper visibility of the status pending with other teams because the information of different countries candidate status need an isochronized platform.

### 3.4 Strengths of Current Tool Used in Fluidio

The requirement gathering exercise with recruitment team and technical architect helped in capturing the strengths of the current recruitment tool. There are 350+ candidates already recruited from current recruitment process which is best example. Various strengths of current recruitment are listed below: -

#### 3.4.1 Reports and Dashboard

Dashboard shown in Figure 11 consist of lot of reports and it's easier to track many details at one page and this tool fastens the current recruitment process. It helps to take better decisions, increase recruiter productivity, and manage the entire recruitment and applicant management process from a single, easy-to-use interface

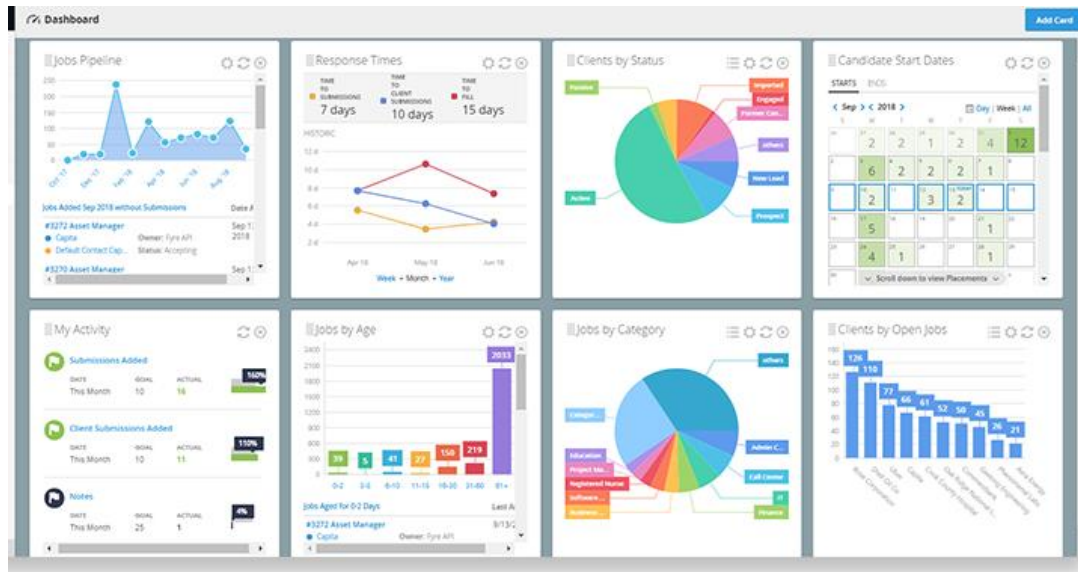


Figure 11. Dashboard of Applicant Tracking System and CRM

In Figure 11, a report can use the tabular, summary, matrix, or joined format. Subtotalling the reports gives a tool to analyse trends in the data and group sets of information, sort the groupings, and compare subtotals for each set against the overall total. In summary and joined reports, subtotal can be done by multiple fields to give cascading sets of information.

### 3.4.2 GDPR

The EU General Data Protection Regulation was designed to harmonize data privacy laws across Europe and to reshape the way organizations across the region approach data privacy. The applicant records which are created in the system for the candidates not selected used to get deleted after 1 year as trigger is written to delete the record which are more than 1 year to follow the policies and privacy of the candidate.

### 3.4.3 Using Salesforce Platform as a Tool

Entire process has lot of stages from job advertisement to Hired and the applicant record is created using salesforce platform and the one object helps to maintain all the stages at one page make it easier and simpler to understand .From the posting of a new position



through the interviews aimed at filling it, it gives a single location to easily see what kind of progress making towards a particular position. Figure 12. displays the all the stages from Steering to Hired to Rejected at one view.

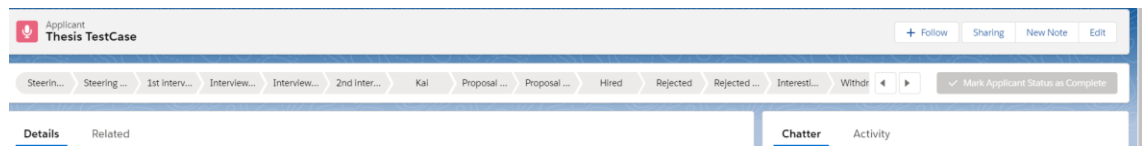


Figure 12. All stages in one Applicant object

#### 3.4.4 Access Management

Access management is centralized and it's easier to get information from one team as there are less people and anyone can coordinate easily with the team. This is easier for the "superheroes" working in Fluidio to directly go to them or email them to know their queries, but it sometimes become burden for the team to reply. For one side, this is strengths for consultants, developers working in Fluidio and at the same time, its weakness for team to answer all the queries and more efforts are required from their side.

### 3.5 Weakness of Current Tool Used in Fluidio

Several weaknesses were found in the current tool. Mainly they are related to time, complexity and documentation. The weaknesses identified are explained in more detail below.

#### 3.5.1 More Reviewing Application Time

When hiring is done through Fluidio Event or school corporation, it's become difficult to screen a lot of applications in shorter period .e.g. on average 1000 candidates have seen the event and of them 300 has applied for the application and of them to screen all 300, it takes lot of time for less number people in the team. This process needs more filtering to make it smoother.

### 3.5.2 Lack of Automated Email in Steering Process

Steering process involves a many application and to send the rejection email, personalized email used to send but this process requires lot of time and this email needs to be automated for certain criteria so that correct templates can be selected itself. Lack of automation makes it time consuming and increase the recruitment process time as well. Email template are used as a generic template to send through recruitment process. One of the Example is shown in Figure 13.



Figure 13: - Sample Email of Rejection Email

Figure 13 shows the sample email of rejection email which is used to send manually for each candidates who is not fit for the requirement .Like rejection Email , selection emails are also send manually .The number of applications increase, the number of sending email will increase which will increase the time and recruitment process time of other candidates.

### 3.5.3 Difficult to Maintain Documents

Documentation become quite complex when there are lot of candidates selected and joining in one month and after selection, all their information related to contract , tax ,devices used ,laptop, background check need to be stored .Currently there is lack of cloud file storage where candidate can upload its documents and recruitment team can see the documents. Team must maintain the information manually and must reply to

candidate manually in case other documents are required. Shared File storage system is missing, and it sometimes increase the recruitment process time.

#### 3.5.4 No Self-Assessment Tool for Recruitment/Visa

There is no self-assessment tool for the selected candidates who got selected after different rounds of interviews and wanted to know about the onboarding related queries or visa related queries .The Email is the only option to contact to people and culture team and people and culture team has to revert each people queries and this also increase the recruitment process time as responding to queries takes lot of time. Self-assessment usually helps to respond to those queries which are common and save the time like frequently asked questions. Lacking tool increase candidates visa timelines and affect onboarding dates sometimes.

#### 3.5.5 Lack of Updates at Certain Stages: -

Candidate who has attended interview needs information that this profile is in progress and this profile is received. Due to more application review, applicant get response after a quite long period of time and it's difficult for candidate that this profile is going to be processed further. There is no common tracking platform for candidate to get the updates. Only source is email. Community cloud portal is missing in the system for this process.

#### 3.5.6 Hard to Follow-up candidates Without Feedback

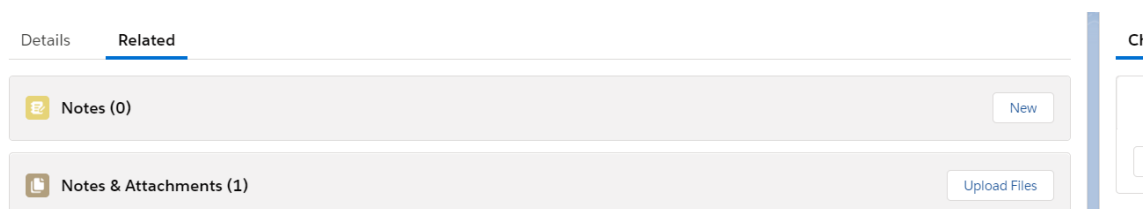


Figure 14: -Notes and Attachment used for Feedback

Figure 14 displays the notes and attachment in applicant record which is used by recruitment team and interviews to gather the information and provide the feedback of each

round of interview i.e. why the candidate is selected or rejected so that it's easier for recruitment team of any country to understand the reason behind this. But due to lack of time by interviewers or some other reason, the feedback notes are not used and it's difficult to get the transparency of candidates feedback and difficult to follow-up .This needs a proper training in all team to make use of it as this is mandatory step.

### 3.5.7 Different Countries -Different Process

Fluido is operated in many locations like in Denmark, Norway, Sweden, Germany, Finland, Slovakia and each country have different recruitment panels and sometimes it's difficult to track the candidate information as information is scattered in different places. There is need to gather the information at one place and there is need of centralized process so that synchronization is maintained among all countries.

### 3.6 Summary of Current Tool

The current recruitment has been facing challenges related to increased productivity of the recruitment team working on the tools, maintain lot of applications of the candidates, documentation file storage. Each of the weakness of the current recruitment tool found in workshops and interviews of technical architect, consultants and recruitment team of Fluido. So, this document storage projects a bigger challenge for the Fluido as they need to develop or revamp the document process and move from on-premise to cloud based.

This redesigning of the tool can become recursive task for the Fluido as they can repeat same process or development methodologies for each customer who are using salesforce tool as recruitment process. So, there is need of an improved tool which can be deployed to each country so that all countries can synchronize and follow a same process

## Current State Analysis of Recruitment Tool

<p><b>Face to Face Interview with Recruitment Team</b></p> <p>Summary of the discussion:</p> <ul style="list-style-type: none"><li>• Synchronization is missing among different countries</li><li>• Tool is simple and lacking some features like documents attachment</li><li>• Automation is missing at Email sending/Receiving</li><li>• Lot of Manual steps</li><li>• Hard to collaborate with other teams</li></ul>	<p><b>Interview with Fluidio Consultant(New Joinee)</b></p> <p>Summary from discussions:</p> <ul style="list-style-type: none"><li>• Not getting updates if anybody receiving the profile or its in progress or its rejected</li><li>• Need to get more information on company goals and vision so that candidate can take right decision</li><li>• Support in all incoming communication channels eg, phone, email etc.</li><li>• Help needed for Documentation for successful application and visa documents</li></ul>
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Figure 15: -Summarized points of weakness from interviews and workshop

Figure 15 shows the summarized points of weakness conducted in workshops and face to face interviews. Apart of weakness, strengths of current process like reporting and dashboard, keeping GDPR in practice, centralized access management and simple tool make it more useful and easier to understand the process.

As Fluidio is using Salesforce as a platform and its recruiting process is also on salesforce platform and candidates hiring are also working on salesforce, so it become easier for each employee working in Fluidio to understand the system in one go.

This summarizes the current scenario of recruitment process and in the next section, there is literature view and conceptual framework of the recruitment process.

## **4 Existing Knowledge on Recruitment Tool**

This section discusses existing knowledge on recruitment tool in literature to help find solutions for the weaknesses identified in the current state analysis. The literature research is around the guidelines for building an improved tool which meets the needs of recruitment tool in changing landscape of IT systems. The first part is the requirement gathering for the recruitment tool, which includes identifying the need of artificial intelligence in recruitment which is needed by the IT organizations. Secondly existing knowledge is investigated in identifying file storage tools which can best fit for storage of recruitment documents. Third topic is about identifying digitalized effective platform for self-assessment tool in recruitment. Fourth topic is conceptual framework for a systematic approach for IT recruitment team in an organization which includes all the stages from job posting to steering to hired stages.

### **4.1 Identifying Need of Artificial Intelligence in Recruitment for Less Reviewing Time and Automation**

Artificial intelligence is particularly effective and efficient at processing unstructured data and can process vast amounts of structured data efficiently. In supervised machine learning, an AI technology can include the inputs and the correct outputs from which the computer learns the patterns and develops the rules to be applied to future instances of the same problem. (Jeannette,2020).

Recruitment system is flooded with hundreds of profiles from applicants who are looking for the new job in new technologies and to prioritise them takes a long time and even days where artificial intelligence transforms the approach by selecting potential candidates with new algorithms and solutions used in artificial intelligence. The artificial intelligence lifecycle in human resource as shown in Figure 16.

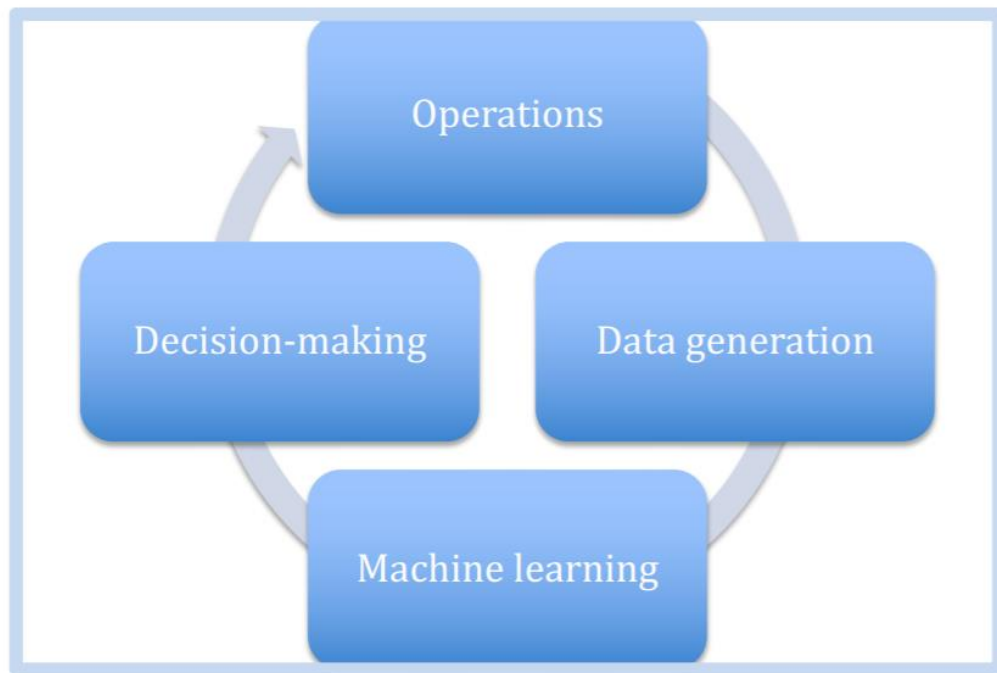


Figure 16. The life cycle of an AI-supported HR practice (Cappelli,2019)

Figure 16 describes the lifecycle of AI-supported HR. During Data Generation stage information systems, applicant tracking systems are all critical inputs.

After data generation stage, there is machine learning stage where there are lot of algorithms and broad set of techniques are used in which data scientist uses a machine learning algorithm and determines the accuracy of the system. There are various prediction algorithms which might see which applicant characteristics have been associated with better job performance and use that to select candidates in the future. There are other algorithms which are used to advise employees on what training make sense for them to take, based on the experiences of similar employees.

After machine learning “, there is another stage called as” Decision-making,” This is the final stage which deals with the way in which insights are used from the machine learning model in everyday operations. Managers today often have the option of ignoring predictors about candidate success, for example, using it as they see fit, and generating their own data in the form of interviews they structure themselves. (Cappelli,2019). The

below Figure 17 shows the partnership of human behaviour in terms of uncertainty, complexity and equivocality with Artificial intelligence

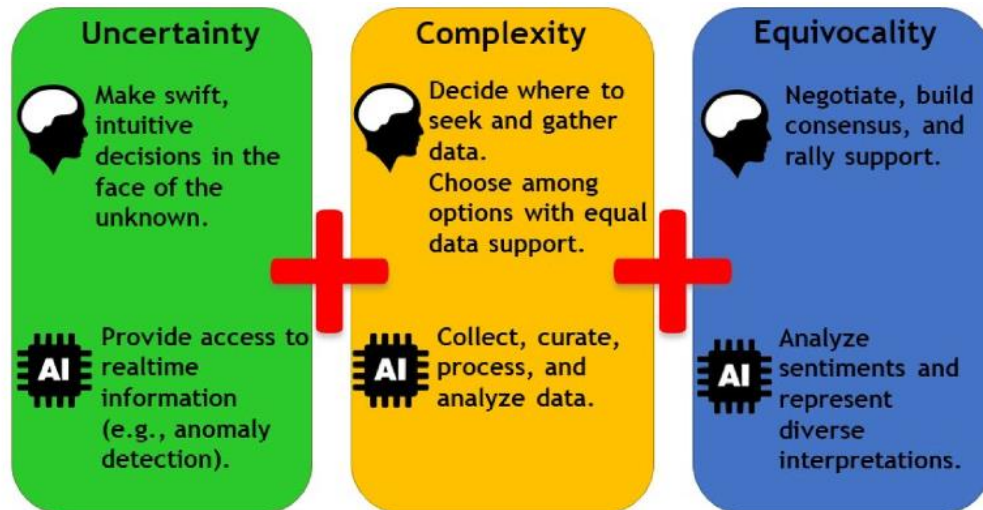


Figure 17. Complementarity of humans and AI in decision-making situations, typically characterized by uncertainty, complexity, and equivocality. (Jarrah,2018)

Figure 17 shows the partnership between human decision makers and AI and can results in significant way like humans and AI technologies can collaborate to deal with different aspects of decision making. Artificial Intelligence can tackle complex issues using analytical approaches and humans can focus more on uncertainty and equivocality using more creative approaches. Therefore, humans and AI collaboration can play a combined role in almost all complex decision making. (Jarrah,2018).

Einstein Analytics is also one of the tools in salesforce which is related to artificial intelligence and datasets are used for training process to test the model for accuracy. Training data used by the training process to create the model and Test data are set aside by the training process to test the model accuracy. Einstein Vision is used to create the model. The Einstein AI model is shown in Figure 18.



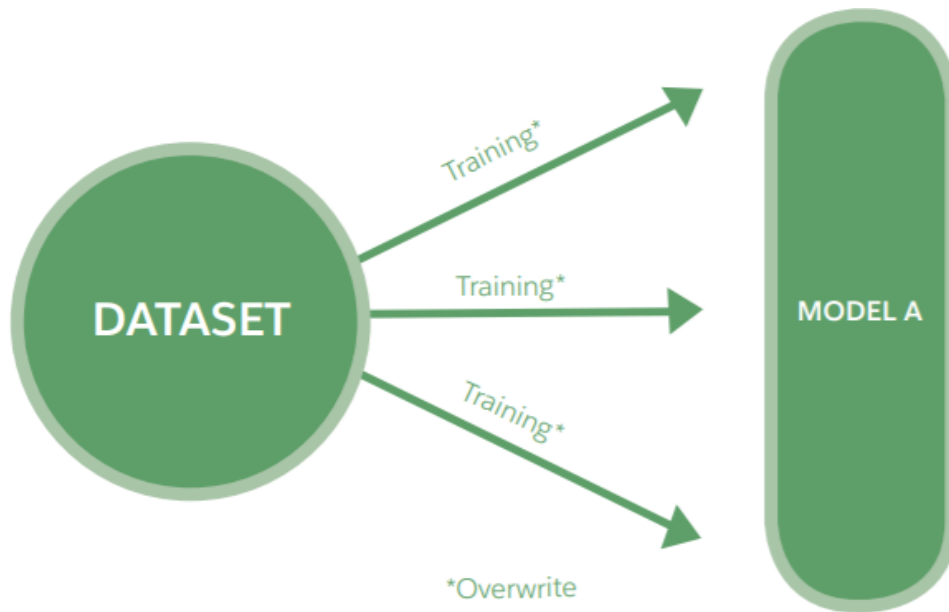


Figure 18. Training and retraining Model in Einstein AI (salesforce)

Figure 18 shows the training and retraining model in Einstein. Einstein Language -80% of the data is used to create the model, and 20% is used to test the model's accuracy and can see differences in models and model metrics even when those models are created from the same dataset. (salesforce)

#### 4.1.1 Identifying Scope of Automation

The basic purpose of selection in human resource management is to choose the right candidates and to eliminate unsuitable ones and It is difficult to evaluate on the basis of skills, experience and observations as no proper profiling has been done as the different people have different skills and this make selection process complex . Automated platforms via web services would increase the efficiency and accuracy of matchmaking for the appropriate candidates (Samad,2012).

## 4.2 Identifying Storage Tools for Email Attachment to Current Recruitment tool for Easier Documentation

There are many tools which are researched for current tool of recruitment like outlook integration, Gmail integration for email attachments to salesforce. In outlook integration, when email to Salesforce is added, the email is added as a new task. When email attachments are added in Salesforce for outlook or email to salesforce, attachments are included on the attachments related lists. When attachments are added using Outlook integration, attachments are added to Salesforce Files.

Outlook integration	Outlook integration in supported versions of Microsoft® Outlook, by selecting Manage add-ins. If the integration isn't available, add it from the Microsoft® AppSource Store.  In Salesforce, enable Email to Salesforce in your Email settings, with Always save email attachments selected	Outlook Integration in Salesforce Setup	After you select to log the email to Salesforce from Outlook, select the option to include attachments.
Salesforce for Outlook with side panel		Side Panel and Add Email in your Outlook configuration	Automatically, after you add an email to Salesforce from the side panel.
		Side Panel, Add Email, and Allow users to select attachments in your Outlook configuration	When you select  after you add an email to Salesforce from the side panel.
Salesforce for Outlook without side panel	Email to Salesforce in your Email settings, with Always save email attachments selected	Email to Salesforce in Salesforce Setup and an active Outlook configuration that includes you	Automatically, after you add an email to Salesforce using the Add Emails or Send and Add buttons in Outlook.
Email to Salesforce	Email to Salesforce in your Email settings, with Always save email attachments selected	Email to Salesforce in Salesforce Setup	Automatically, after you send the email to your Email to Salesforce address.
Gmail Integration	Gmail integration in your G Suite Gmail account. If the integration isn't available, add the Chrome™ extension from the Chrome Web Store.	Gmail Integration in Salesforce Setup	After you log the email from Gmail, select the option to include attachments.
Salesforce Inbox	The Salesforce Inbox application on iOS™ and Android™ devices. If the application is not available, get it from the	Salesforce Inbox in Salesforce Setup	When you log an email to Salesforce, any attachments in the email are logged.

Figure 19. Ways to add Email attachment to salesforce(salesforce.com)

Figure 19 describes the different ways of email attachment to salesforce and once its added, it will reduce lot of manual work to add the documentation to laptop and then move those documents to new storage system. Data can be moved automatically when email are sent and integrated for this system for related object.

#### 4.3 Identifying Digitalized Effective Platform for Self-Assessment in Recruitment and for Regular Updates

For Self-assessment and knowledge article, frequently asked questions found in the website of IT companies are looking as shown in below Figure 20.

##### **How long do you advertise roles for?**

We typically advertise positions for between two and four weeks, but it can be shorter or longer depending on the role. All positions have an application closing date and we recommend that you complete your application as soon as possible in advance of this date.

##### **How do I search for positions in my preferred country?**

You can use the "country" filter in the "Open roles" section to show open jobs for a specific country.

##### **Can I apply for more than one role?**

Yes. Feel free to apply for any positions that you think match your skills and experiences.

##### **Is there an address I can send my CV to?**

Unfortunately, the high number of applications we receive means we cannot accept CVs via e-mail or guarantee that they will be considered. Please submit your application to an open position or, if you prefer, make an "open" application which will allow our recruiters to find and match your details as other positions are opened.

Figure 20. Sample Template of Frequently asked questions for Recruitment of IT website

Figure 20 describes the frequently asked questions for recruitment of one of IT company and similar way knowledge articles help the candidate to understand the queries themselves. There are traditional approach and new approach to show the FAQ architecture and new approach described by (Morio,2012) is shown in Figure 21.

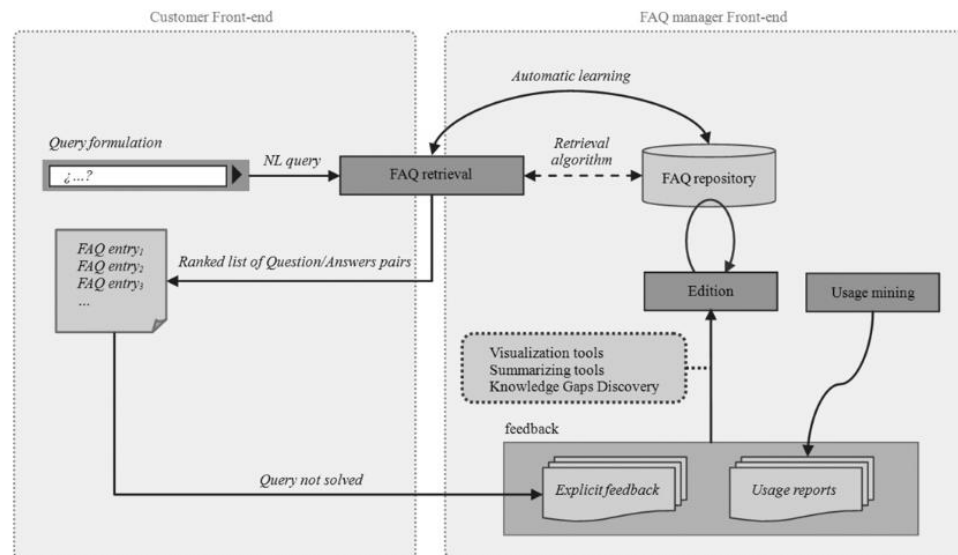


Figure 21. Functionality diagram of FAQ

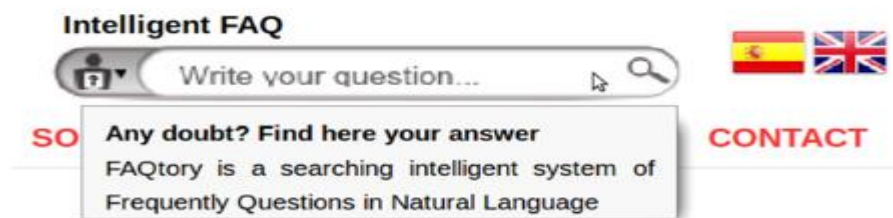


Figure 22. Example of FAQtory bar embedded in an already existing website

In Figure 21, two Front ends have been designed where front-end Customers can type their questions. Simultaneously, there are questions which were often retrieved but rarely read. By means of visualization and summarizing tools, FAQ managers get in a meaningful manner the information contained in explicit feedback and usage reports. By analysing those data, FAQ managers are provided with enough information as to edit their FAQs and so improve their performance. Figure 22 shows the example of FAQtory which is based on the functionality diagram. (Morio,2012)

#### 4.4 Identifying Feedback for Recruitment Process and Making One Process in All Countries

There can be different feedback templates used for the recruitment process and many companies are following this approach. Figure 23 shows the feedback template of survey conducted for recruitment process from candidate.

### **5-answer Likert scale interview feedback survey questions**

From 1 to 5, to what extent do you agree with these statements (1 - strongly disagree and 5 - strongly agree)

- It was easy to find all the information regarding the position
- Recruiter told me how to prepare for the interview
- Recruiter was friendly
- Recruiter was professional
- I got all the responses from recruiter I needed
- All my questions were answered in a timely manner
- It was easy to apply for the position
- It was easy to find the company for the interview
- It was clear how did I need to compare for the interview
- I felt I was very welcomed when I came for the interview
- I was happy with the time between the application and the response
- I was happy with the time between the interview and feedback

Figure 23. Feedback Template in IT website

Figure 23 shows the feedback template of survey conducted for recruitment process from candidate as usually interview feedback surveys are conducted by human resource team to optimize their recruiting strategies and calculating the overall interview process and its efficiency.

#### 4.5 Conceptual Framework

This section deals with literature and existing knowledge that can be used for improving the recruitment process and the tool used for different phases of process in Fluidio. The outcome is the conceptual framework presented in Figure 23.

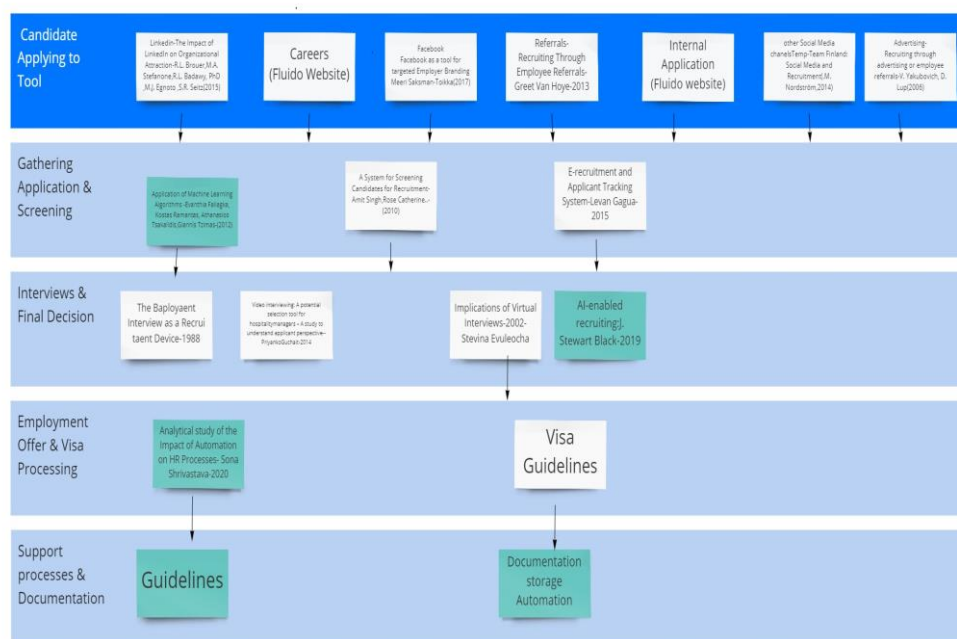


Figure 24- Conceptual Framework for developing improved recruitment tool –green ones are analysed from existing literature and others are already present in the system.

As Figure 24 shows the conceptual framework consists of different tools that can be used in recruitment process. The conceptual framework is based on the theoretical concepts and ideas from the literature review done in this section. The process ideas for the recruitment tool were mostly based on the articles based on the FAQtory: A framework to provide high-quality FAQ retrieval systems by 'Morio,2012', A decision support system that provides an automated short listing of potential employees 'Samad,2012'. Artificial intelligence in human resources management- 'Cappelli,2019'.

The solution and idea for improving recruitment tool from both cloud system and artificial intelligence literature. As the existing references are helping in improving tool in various phases of recruitment process. The notes marked in green colour in Figure 24 are new tools and analysis for relative phases. During application gathering and screening process, the analysis of many processes is done, and best practices are highlighted which can help in building the new tool on the top of current tool. The ideas and design pattern of salesforce integration with different tool matching the current recruitment tool can be combined to form cloud-based storage platform. Identifying the need of artificial intelligence while application gathering and screening process are taken from Artificial intelligence (AI) and value co-creation in B2B by P. Jeannette,2020.

## **5 Building Proposal on Recruitment Tool for Fluido**

This section of the thesis presents the design and architecture of proposed recruitment tool for Fluido Oy which is for their recruitment team. The design and architecture include reusing the existing tool which has been built for a recruitment team and enhancing it to avoid gaps analysed in current state analysis. The new recruitment tool will introduce automation, new technologies like artificial intelligence and improvement over existing functionality. The section ties together the current state analysis done, and the conceptual framework designed after literature review in building the improved tool.

### **5.1 Overview of Improved Recruitment Tool**

The current state analysis helped in identifying the weaknesses in the current recruitment tool and that are related to the limitation and technical incompetency of the current recruitment tool. The aim of the proposal is to improve the recruitment tool is to enhance the tool features and making the recruitment process simpler and easier by use of cloud computing and using the existing platform.

The new recruitment tool should overcome the weaknesses identified in Section 3 and it is built with the Fluido Oy team in the fields discussed in Section 4. The Fluido team include a consultant for improving the process and tools features, team lead for discussing the suggested ideas for the improved process and recruitment team for analysing the proposal and data inputs regarding process changes due to the new tool features. The architecture of improved version of recruitment tool is as shown in Figure 25.

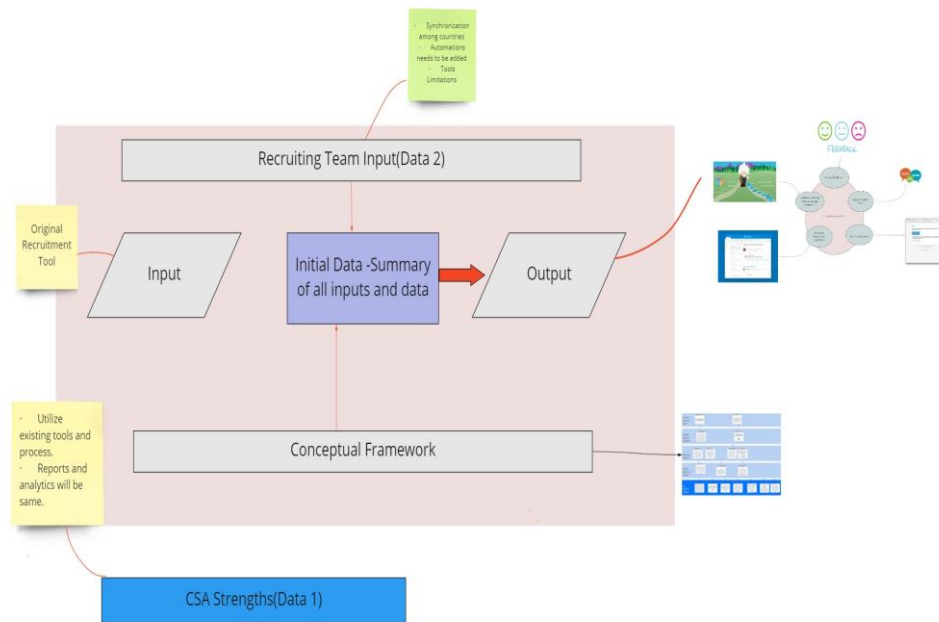


Figure 25. Architecture of Proposal for Recruitment tool for Fluido

In Figure 25, there is detailed architecture view and proposal plan to be done for the thesis. Input are Data 1 and Data 2 where Data 1 are the informants like Recruitment team, consultants and developers inputs for current state analysis and data 2 are the summary and inputs of data 1 and conceptual framework from the existing literature and combining data 1 and data 2 results in proposal plan which will be described in section 5.3. Output is linked to proposal plan and the relative image is shown here and detailed description will be shown in below sections.

## 5.2 Technical Specifications of Tool

This section deals with stakeholder suggestions which are analysed for current state analysis of the recruitment tool. Key focus areas from Data1 are shown in column 1 of below Table. Column 2 describes the suggestions from recruitment team and technical architect and column 3 describes the description of suggestion.

Table 1. Key stakeholder suggestions for proposal building (Data 2) in relation to findings from the CSA (Data 1) and the key elements CF.



	<i>Key focus area from CS (from Data 1); or/and the element of CF</i>	<i>Suggestions from recruitment team, technical architect into groups (Data 2)</i>	<i>Description of the suggestion</i>
1	Hard to Follow-up candidates Without Feedback	a) provide the training for feedback as this is already in the tool.	The consultant team suggested to provide a proper guidance on the tool and about the importance of feedback added in the too.
2	No Self-Assessment Tool for Recruitment/Visa	a) provide FAQ or knowledge article.	Technical Architect suggested to have a knowledge article based tool or FAQ which solve the common queries. Community cloud can be one of solution for this as this is already salesforce-based tool
3	Difficult to maintain documents	a) Email to salesforce attachments are needed	Technical Architect suggested attachment to be attached in salesforce through integrations and make it automated.
4	Reviewing Time	a) screening applications and steering review time can be less by salesforce Einstein	The developer team suggested to use the artificial intelligence in the tool to enhance the prediction and to decrease the time.

In Table 1-The CSA focus areas are reviewing Time, difficult to maintain documents, no self-assessment and hard to follow-up candidates without feedback.

Alternatively, the relative suggestions from the stakeholders are included like use of salesforce 'Einstein AI', email to salesforce attachment, FAQ and providing training to users can be done under each element of the proposal separately (as suggested below in Section 5.2.1, 5.2.2 ,5.2.3, 5.2.4 , 5.2.5). At the end of Section 5, the proposal is pulled together as the proposal draft (see Section 5.3).

### 5.2.1 Use of Artificial Intelligence

With artificial intelligence, lot of data can be converted into insights as within hours of receiving a CV, recruitment selection productivity can be improved. Whenever the applicant applying for same job, recruitment team can shortlist a stronger candidate in shorter timeframe and safeguard the privacy of candidates by using Einstein AI. Figure 26 shows Einstein AI of Recruitment tool which is using prediction builder, chatbots, analytics and discovery and next best action.



Figure 26 Einstein AI for Recruitment tool in Fluidio having prediction builder, chatbots, analytics and discovery and next best action.(salesforce.com)

Prediction Builder like predict human resource demands so that team can right size pipeline for employee headcount increases and other prediction can be regarding offer acceptance like predict the likelihood of a candidate accepting an offer so that team can hire the best talent. These predictions help Fluidio in employee headcount and offer acceptance. There can be other predictions as well depending on future scenarios.

Analytics and discovery-The Einstein training model is usually built with random forest and linear modelling algorithm where all new applications in Fluidio can individually score every day by sending the new Salesforce contacts' profile to the Einstein AI model.

With mobile capabilities, it is easy for recruitment team to see the dashboards with a range of key metrics, including open opportunities, team targets and candidates placed.

Once a candidate is placed, Salesforce automatically updates Fluido other systems to simplify the updating process of all details to other systems. The solutions from the AppExchange to de-duplicate data and integrate Salesforce with other systems will make it easy to connect well.

Chatbots- It's also easy to connect different information sources like job portals, websites, recruitment agencies, linked in and other external portals to keep in touch with candidates throughout their careers whether they are looking for a new job through Fluido RecruitmentBot which is shown in Figure 27.



Figure 27. RecruitmentBot which can be used for finding New Job and Booking Interview Calendars for new candidates in Fluido

Figure 27 describes the recruitment bot which is the sample name given for the thesis for chatbot and sample text messages are shown in the Figure 27 to understand the flow of chat and it can also book calendar for interview slots which will automate the processing of candidate and recruitment team .There are Einstein recommendations as well.

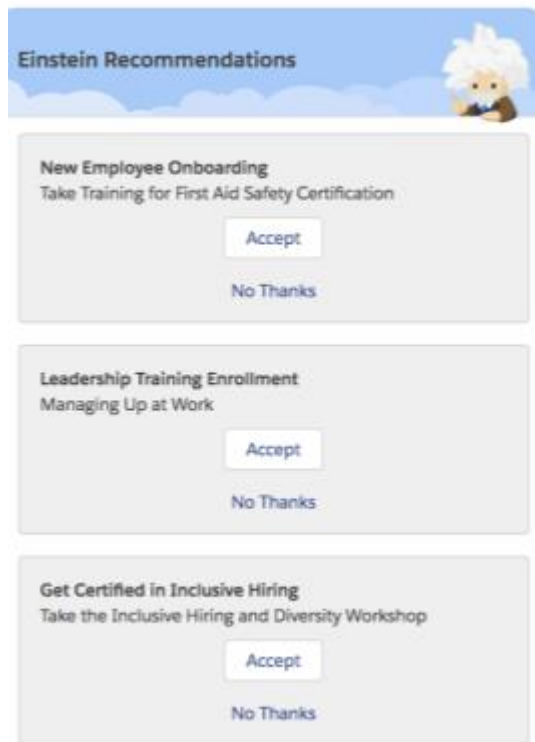


Figure 28. Einstein Recommendations in Fluidio

In additions it can help in recommendations like when you employee is hiring, it can recommend the applicant to complete the process which is needed after joining or during joining or before joining. Overall, it will overcome all the gaps which are faced in current recruitment tool like reviewing application time, automations and it will give additional features of chatbots, recommendations and predictor tools.

### 5.2.2 Outlook/Gmail Integration

Through the research and analysing the proposal with technical team, outlook and Gmail integration fits the solution from email to salesforce attachment which will minimize the

work of attaching the applications and documents from system to laptop and other shared folder and then attaching to the folder or applications where it is needed. Figure 29 shows the flow of attachment from Gmail Integration and outlook integration which is done via email to salesforce

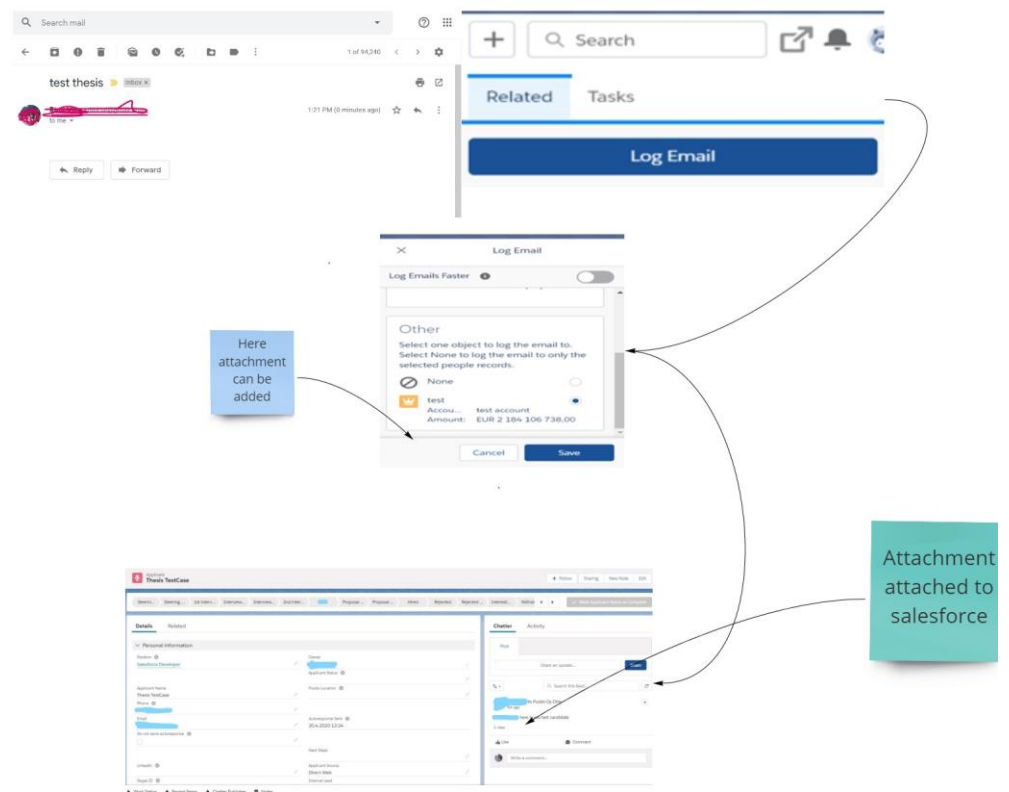


Figure 29. Flow of attachment from Email to salesforce Applicant Record in Fluidio

Figure 29 shows the integrations and automated flow from email to salesforce which will helps and enhance the productivity of recruitment team and solve the problems of attachment and spacing and maintaining a lot of documents.

This automated process makes the recruitment documents process easier.

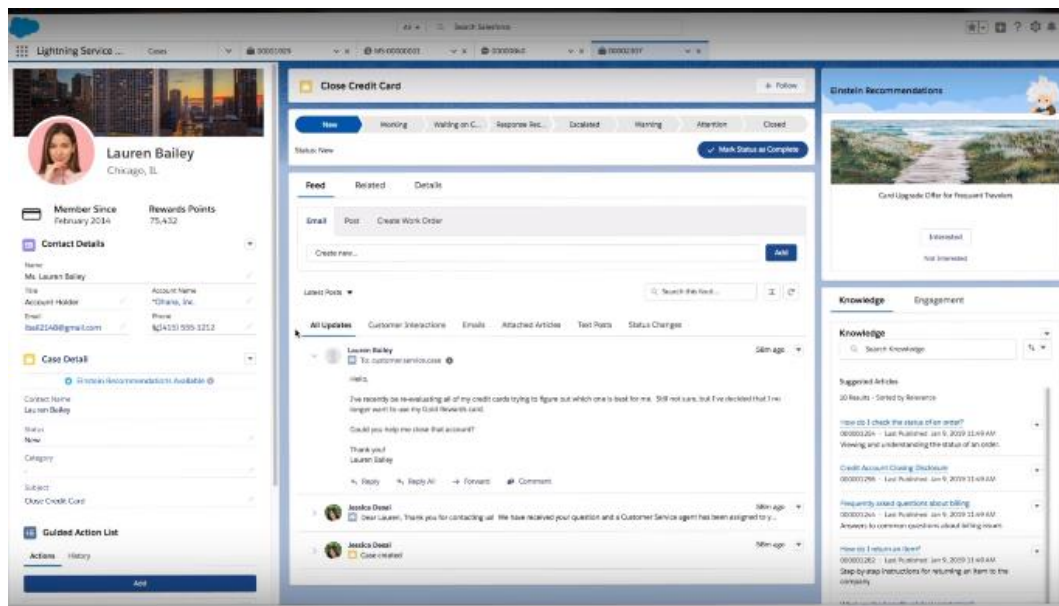
### 5.2.3 Automation

The automation of chatbots and predictor analysis is already explained in section 5.2.1 and document automation is explained in section 5.2.2. In this section, automation of

Email will be explained where there are templates used but they are sending via personalized messages. Automation Email can be created via different workflows and triggers which are already present in salesforce and generic email templates can be created for those. This is already a feature in salesforce which can be used. This will overcome the email manual tasks in Fluido recruitment process.

#### 5.2.4 FAQ-Frequently Asked Questions.

Einstein recommendations are one of the examples which can increase the productivity of candidate. Recommendations can be of job specific or country specific or role specific which is already explained in section 5.2.1. In this section, there can be other solution to self-assessment tool. Self-assessment tool refers to the questions and answers which are already defined in the website or some portal which can be accessible by candidate or the candidates who are hired and during the hiring time and joining time, there are lot of questions in the mind of candidate like visa guidelines, offer date extensions, company' culture, opportunities to grow in future etc. Figure 30 shows the template of record with knowledge articles.



Fig

Figure 30 shows the suggested knowledge articles for Fluido

These questions can be achieved by community cloud in salesforce where applicants hiring communities can see the knowledge articles and ask questions if they are not in

knowledge and connect to Fluido recruitment team easily except email which is the current process for now.

Knowledge article quickly deliver the right answers to applicants by adding knowledge base to recruitment workspace and it will automatically suggest the best articles for every conversation, then make it easy for recruitment team to preview and share them over any channel with one click.

### 5.2.5 Feedback

Feedback offers, feedback requests, and feedback related to performance summaries can be all managed from the feedback tab. The feedback tab displays the recent feedback, and it can be filtered to see different types of feedback records. For example, select New feedback requests to see feedback records that require their input. The default feedback filters include All Feedback, Declined Feedback Requests, Feedback About Me, Feedback About My Team, Feedback About Others, Feedback About Topics, New Feedback Replies, New Feedback Requests. This can be maintained in backend like this in the application and can be used for further research and improvements

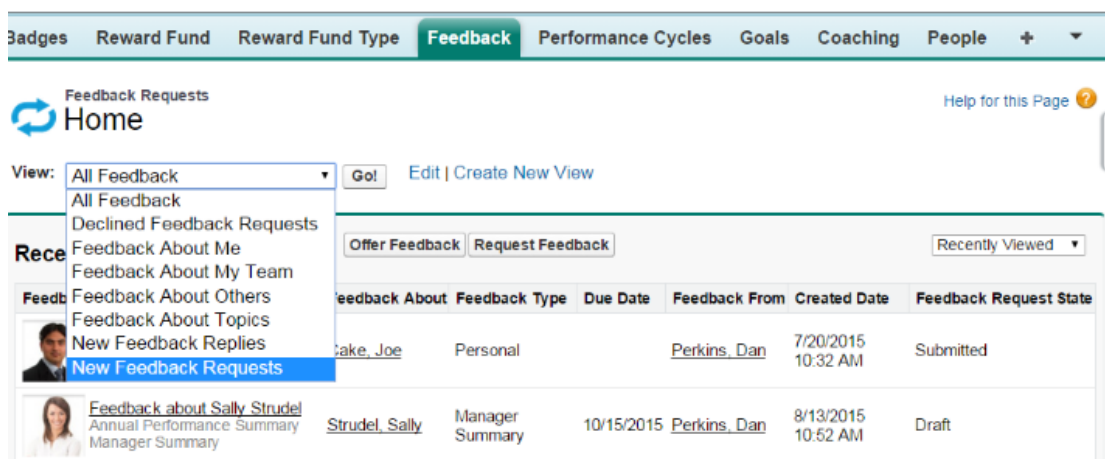


Figure 31 Feedback to be stored in application for future research and Amendments.

Feedback templates are already described in existing knowledge feedback sections which will be displayed to applicants and in the application, it can be maintain by recruitment team for future enhancements and amendments. Feedback of candidate can also

be stored in the object and can be integrated with applicant object to have feedback and if this is mandatory then each country must add the feedback and it will be synchronized process for each country operated by Fluidio.

#### 5.2.6 Training

Training about adding feedback and maintenance of the tool and new features included in the tool should be mandatory to attend for recruitment panel so that its easier for each to understand the flow and process and can go through process easily. This can be done monthly or bimonthly with team by inviting them on calendar.

### 5.3 Proposal of Improved Recruitment Tool

It was identified in the current state analysis that overall the change is needed for the recruitment tool used by the Recruitment team in Fluidio. However, new improved tool would also introduce a new way of working for the recruitment tool to work on. The new architecture is integrated with all the solutions proposed in the sections above like outlook and Gmail integrations for documents, artificial intelligence for automations, predictor analysis, recommendations and chatbots and minimizing the reviewing time.

Artificial intelligence will solve lot of issues like automations, reviewing time, recommendations. RecruitmentBot, feedback tool and knowledge articles will work as candidate satisfying tool.

The Figure 32 shows the architecture of proposed recruitment tool.



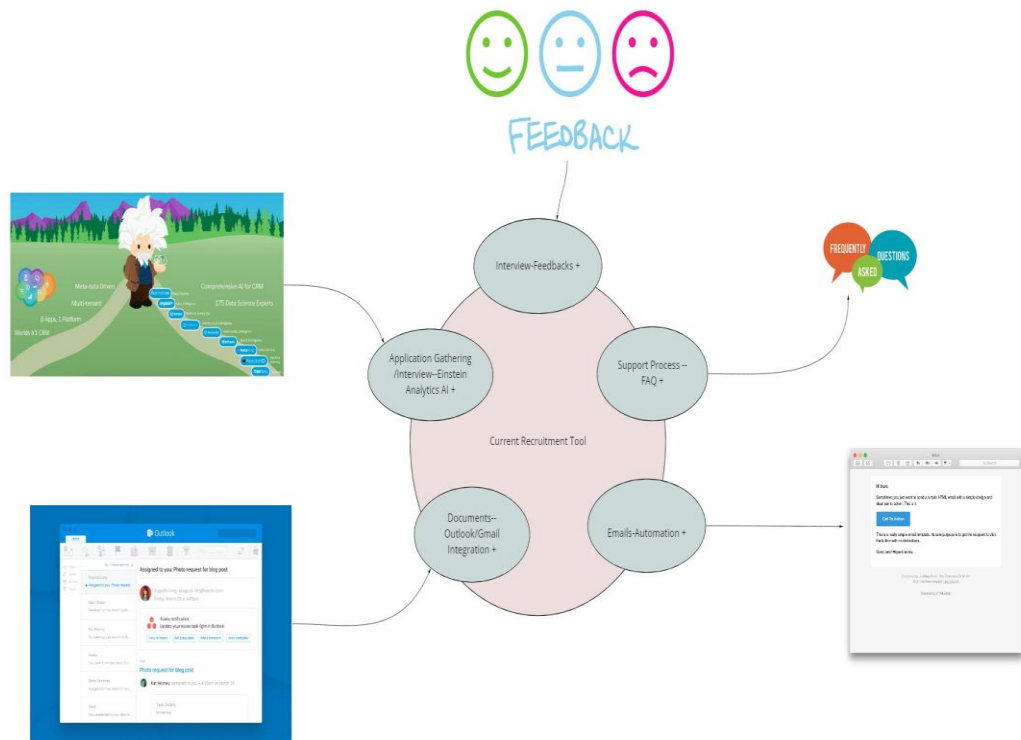


Figure 32. Proposed Recruitment Tool for Recruitment process for Fluidio

The design in Figure 32 shows that current recruitment tool is at the centre of all the tools and tools which are needed in recruitment tool are shown in grey colour. The pictures linked to applicant gathering is of related to Einstein AI and documents outlook, Email template automation, feedback tool, frequently asked pictures are shown to be added on current process and tool.

The proposed cloud-based system will overcome all the issues which are discussed in weakness section 3. This is improvement based on the existing knowledge found in concept of recruitment latest tool. The new proposed plan shows how artificial intelligence, and automation will be increasing the productivity of the recruitment team as well as help the new candidates. Proposed tool supports all the aspect of the service, sales model of the organization so that service and sales teams can better collaborate with recruitment team to build the new tool. In next section, validations of proposal will be discussed.

## 6 Validation of the Proposed Recruitment Tool

This section validates the proposal for recruitment tool in Section 5. Validation has been done together with the technical architect and the recruitment team of Fluido Oy where they have provided feedback for the improved recruitment tool. At the end of this section, the final proposal and recommendations are presented.

### 6.1 Overview of the Validation Stage

This section validates the proposal developed in Section 5. The aim of the validation phase is to make sure that the improved recruitment tool created in Section 5 is valid enough to be proposed to recruitment team to improve their productivity through tool .It will also improve automation, documentation , feedback , surveys , email sending through this proposal. It will also reduce the reviewing applicant tracking time. Figure 33 shows the process of validations done and feedback received from validation.

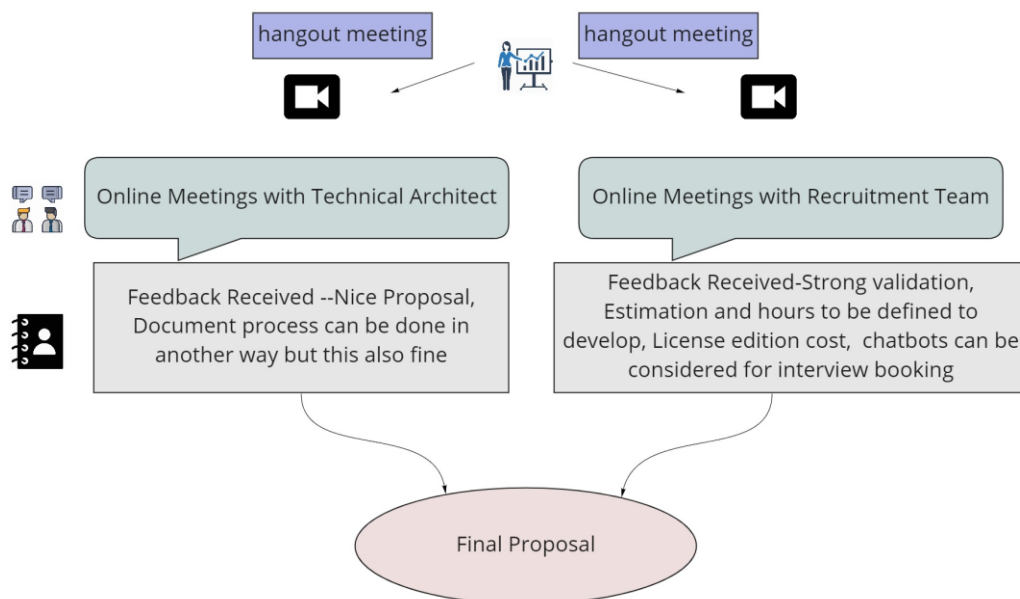


Figure 33 process of validations and feedback received for validation

As shown in Figure 33, The validation for the design and architecture of the new version of tool has been done in two steps. First by having a presentation of the thesis and all the gate work to the technical architect from Fluido Oy. The presentation was done through online meeting scheduled with two experienced technical architects working with many processes of Fluido. They liked the presentation and supported concept of new

improved tool with Artificial Intelligence and supported the new version. The second level of validation is done with the Recruitment Team in Fluidio who is using the tool daily and received some feedback over the design and improvements needed to be done to the current architecture.

## 6.2 Findings of Recruitment tool Validations

This section deals with recruitment team suggestions which are analysed for proposal plan of the recruitment tool. Key focus areas from Data2 are shown in column 1 of below Table. Column 2 describes the suggestions from recruitment team and technical architect and column 3 describes the description of suggestion.

	<i>Key focus area from proposal (from Data 2); or/and the element of CF</i>	<i>Suggestions from recruitment team, technical architect into groups (Data 3)</i>	<i>Description of the suggestion</i>
1	Use of Artificial Intelligence	a) Artificial intelligence predictor analysis is nice, but license cost is needed?	The recruitment team suggested to provide a license cost if needed to add on proposal
2	Community portal knowledge and article	a) Estimations need to be added so that future implementation can be done, and license cost is needed?	Recruitment Team suggested to provide estimations on the work so that future implementation can be done. License cost is also needed for this.
3	Outlook/Gmail Integration	a) nice suggestion	Recruitment Team happy with suggestions and looking forward to implement.

4	Chatbots	a) chatbots are not usually useful and if it can book interview booking slots, then it will be helpful	Technical architect team suggested to use chatbots but it's not useful for answering all the queries as it takes to some other queries but if it can book interview time slot, then chatbots are good.
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In Table 2-The proposal focus areas are use of artificial intelligence, community portal and knowledge article, outlook, Gmail integration and chatbots.

Alternatively, the relative suggestions from the stakeholders are included like use of Artificial intelligence predictor analysis is nice, but license cost idea is needed, chatbots are not usually useful and if it can book interview booking slots, then it will be helpful , Estimations need to be added for all proposal so that future implementation can be done. These are done under each element of the validation separately (as suggested below in Section 6.3, 6.3.1 ,6.3.2). At the end of Section 6, the final proposal is pulled together as the Proposal draft (see Section 6.4).

### 6.3 Developments to the Proposal Based on Findings on Recruitment Tool Validation

The data collected from Data 3 was gathered with online meeting with technical architect and recruitment team of Fluidio, who are working daily on recruitment tool and are responsible for the requirement gathering and validation of proposal. The improved version of proposal suggested in the study in below sections. All the information was gathered through the online meeting using google hangout sessions.

#### 6.3.1 Feedback from Technical Architect

This section discusses the validation for the improved recruitment tool designed in Section 5. The presentation for validation with the technical architect was done using the thesis presentation which were prepared for gate presentation, there were suggestions and feedback provided by architect to be considered in the design which can be used in improvements. The suggestion of using chatbots for interview booking and not for general purpose and usage of Artificial Intelligence feature was highly appreciated by the technical architect. They suggested lot of predictor analysis ideas with machine learning feature for the improved tool to increase the productivity of recruitment process.

The improved recruitment tool could provide automations and decrease the reviewing team of applications of recruitment team. There is need to provide future implementation plan for this plan so that any developer can read the requirement and start implementing the steps. The feedback received on improved version of tool and idea on how the subscription model using the cloud-based services could save lot of money for the reviewing time. The technical architect had few queries around how improved tool would be delivered to customer, so that it's easy to use and configure by the customers without much complexity if customer is using recruitment process in salesforce. There is a need for documentation which includes the details of features with improved tool and how to re-configure as per organizations business model.

### 6.3.2 Feedback from Recruitment Team

The validations are done with recruitment team as well and overall team liked all the suggestions and wanted to implement all these proposals to add in current recruitment tool. The Figure 34 shows the validations and improved version of recruitment tool proposal.

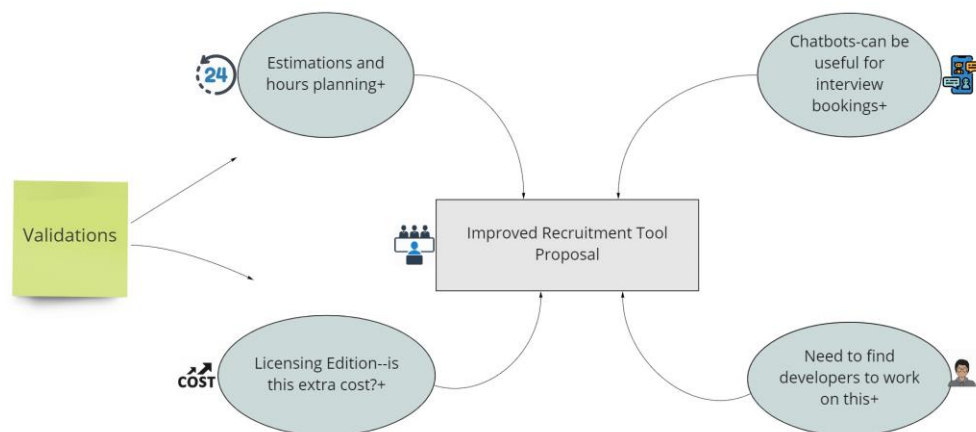


Figure 34. Validations done for proposal of Recruitment tool for Fluidio

Figure 34 shows the validations which are suggested for proposal are estimations and hours planning which are needed for each of the proposal and license cost is also needed

for each of the two proposal like community portal and artificial intelligence. Recruitment team has difficulty to find developers as all the developers are busy in billable work of customers so there is need to plan the division of work which skills are needed to implement for this. Overall the validations are covered in above two sections and final proposal is implemented in next section.

#### 6.4 Final Proposal

The final proposal for improved recruitment tool is based on the initial proposal that has been modified based on the feedback received from the technical architect and recruitment team. Some minor changes have been made to the technical specification to the initial proposed design from Section 5.

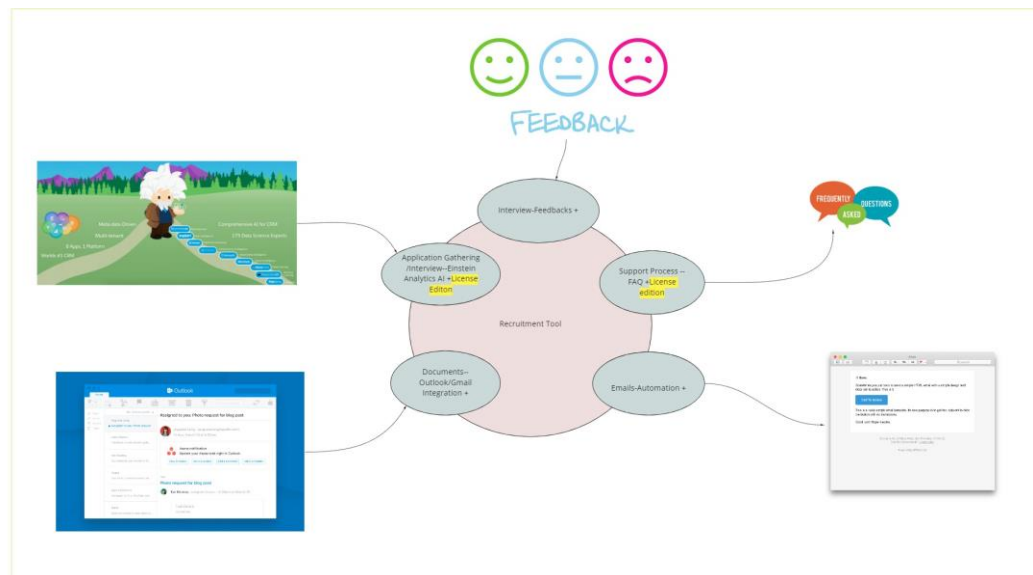


Figure 35 Final Proposal of Improved Recruitment Tool of Fluidio

The feedback received on the improved recruitment tool can be achieved through adding the plan for estimations and hours. Action plan will be added in next section 6.5 for estimations and hours. Regarding the licensing cost it can be referred through salesforce website and depending on users using this process, it cost vary and can be discussed with salesforce support team. Problem of developers can be solved easily if the work is divided into different developers based on their skills like developer having community cloud skill can easily add knowledge article and developer having artificial intelligence can do artificial intelligence development work, integration developer can work on integration with Gmail and outlook ,sales and service cloud developer can work on other

email automations and feedback work and consultant can elaborate these requirement to different developers and collaborate with each of the developers. This can easily solve this issue.

These are minor changes to the existing design proposed in section 5. The changes suggested can improve the usability of the tool for the recruitment team and candidate applying for the new positions.

## 6.5 Action Plan

Action plan for proposal suggested in section 6.4 is described in this section. Artificial Intelligence- estimations for artificial intelligence is around one month and for license edition comparison can be through salesforce website like there are types of pricing defined in the website like Einstein Predictions, Einstein Analytics Growth and Einstein Analytics Plus where Einstein Predictions provide automated discovery and predictive insights features and Einstein Analytics Growth provide complete analytics platform for all data and Einstein analytics plus provide advanced analytics platform with AI built in. Consultants can help in all installations and edition pricing and relative developer can do the development work and overall process takes one to two months.

Gmail Outlook Integration- Estimations for Gmail and outlook integration is around 2 weeks. This is already implemented for many customers of Fluidio and service cloud developer can implement this.

Knowledge article-Estimation for community cloud takes around 2 weeks and community cloud consultant and developer can handle this requirement. License edition cost can be taken from salesforce website. Feedback-Feedback object can be done in 2 days and it be integrated with applicant object and it can be done by any developer. Email Automation- This development can be done in 2 weeks depending on the process and flows. This can be achieved through trigger and workflows.

Overall the implementation plan is around 3-4 months and depending on availability of developer, it can be implemented. This concludes the proposal, validation, final proposal and action plan and in next section, conclusion will be discussed.

## 7 Conclusions

Final section is about the objective and outcome of the study. It gives suggestions for the implementation plan of proposed recruitment tool. This section of the study also shows the evaluation criteria for the recruitment tool proposed and how it meets the recruitment team needs.

### 7.1 Executive Summary

The objective of this study was to introduce an improved recruitment tool to recruitment team of Fluido which can also be utilized for Fluido customers who are using salesforce as a platform for their recruitment process. The current recruitment tool is having the features like GDPR, reporting and dashboard, salesforce as a platform and access management but it lacks the automation with email as most of the features are manual and old. Current recruitment tool lacks the document automation and updates at every stage. At Steering phase, screening takes long time if there are hundreds of candidates. The research method for this study was action research. The study includes the current state analysis to identify the strengths and weaknesses of current recruitment tool of Fluido and the development efforts in building improved tool for different Fluido customers as well. Fluido is already using current tool and 350+ candidates are already recruited from that process using recruitment tool. The main weaknesses which were identified during current state analysis was document automation and candidate profile reviewing time which can be achieved through outlook and Gmail integration and use of artificial intelligence in recruitment process.

The strengths which were highlighted in the current strengths analysis on customer service tool was about the access control in the platform which manages sharing and access of information flow in the platform. The other strength of the platform is about GDPR which requires storing the information in the system for 1 year and deleting it after that if candidate agrees to maintain the information while filling in the details for open position. The outcome for literature study was a conceptual framework of recruitment process that introduces technical specification which is part of the improved tool. The findings from literature deal with digital physical journey which can transform digital to physical and physical to digital journey of the data gathered. The design is based on artificial intelligence, Gmail and outlook integration tool which can be used for new improved tool. The



addition of the technical specification to current recruitment tool helps Fluido development team in repeating same development for different customer and a packaged recruitment platform can be delivered to the prospect customers.

The current state analysis was done in collaboration with experts in Fluido working on recruitment tool daily and designing a tool. The improvements are around the weaknesses collected from the current state analysis of the study. The weaknesses were aimed to improve the usability of the tool for recruitment team, meaning all the features which are slowing the team daily or slows the process of candidate applying for new job. The automation done using artificial intelligence will increase the productivity of recruitment team and decrease the profile reviewing time as well as helps in automation. Artificial Intelligence predictor analysis can predict the offer acceptance by candidates and can predict the employee headcount if there is need for newer employee needed in organization. This improved recruitment tool can be designed using a cloud which consists of cloud salesforce community cloud, sales cloud and Einstein AI. The validation of the proposal has been done by Fluido technical architect and recruitment team who is already using such kind of tool. The suggestions from the architect and recruitment team have been considered for the final design for improving the recruitment tool. The improved recruitment tool helps recruitment team to do predictive analysis of employee headcounts whenever they are needed for organization and to do automation. License Editions cost can be taken from salesforce website and salesforce support team can be contacted if more support is needed for installation. Outlook and Gmail Integration will automate the documents and email process and feedback and self-assessment tool will solve the candidate queries in short timeframe. Estimation and implementation plan have been described in next section.

## 7.2 Next Steps and Recommendations toward Implementation

The section deals with the next steps for implementing the proposed improved tool and how the implementation plans can be prioritize based on the features defined in the proposal. The timelines can be defined for the implementation of improved recruitment tool based on factors such as availability of developers, license cost, installations by consultant as main work is related to community cloud and Einstein AI. The duration of the implementation is decided by the factors discussed above as it must fit the needs of the organization. Overall the implementation plan is around 3-4 months and depending on

availability of developer, it can be implemented. The feedback collection can be done in collaboration with developers from each frontline team by having a weekly touch base call with the consultants taking responsibility for this implementation. A training module can be created for recruitment team to provide required training for using the improved tool.

### 7.3 Thesis Evaluation

This section evaluates the improved recruitment tool as an outcome of the thesis is aligned with the business problem stated in the beginning of the thesis and the objective. Discussion is about how reliable and valid is the work done about the development of platform in the thesis. There are various criteria to map the research quality like Validity and Reliability, Credibility, Relevance, Logic. The validity, creditability and reliability are one of the most important features ensuring the quality of the research work. The tool changes selected are valid based on the new features of salesforce and enough data was collected and analysed before drawing conclusion on strengths and weaknesses of the tools. The references taken from various data sources and combining to one place for recruitment tool has been done to maintain credibility of the thesis. In thesis data was collected from organization document and as well as from the workshops conducted with the recruitment team to make it reliable.

### 7.4 Closing Words

Fluido is using salesforce as a platform so whole thesis is revolved around the salesforce platform and gaps in recruitment process are defined keeping in mind the salesforce platform. Proposal is based on modifications of current tool and validation has been done on new features and integrations which can be done in future according to salesforce. Some proposals can work for other platforms as well and there can be different solutions for the gaps defined in the thesis.

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### **Interview Questions for Data 1 and Data 2.**

1. What is the current process of Recruitment and what tools are used for this process?
2. What are the strengths of tool used for Recruitment process?
3. What are weakness and gaps in current recruitment process?
4. Is there any issue in adding documents to application?
5. How you do think if new salesforce cloud is used for current process?
6. What are the sample templates used for Email in current Recruitment Process?
7. What are different stages for recruitment process.
8. How do you think about the proposal?
9. Are the proposal fits to business scenarios?